Hospital Progress

Volume IV FEBRUARY, 1923 Number 2

ST. JOSEPH'S MISSION, AHTANUM, YAKIMA VALLEY, ESTABLISHED IN 1847. LOG CHURCH BUILT IN 1849.
A landmark reminding travelers of the hardships and fortitude of the early missionaries in the work of Christianizing the savage Indians. Three Sisters of Providence came here in 1875 to work among the Indians.

St. Elizabeth's Hospital, Yakima, Washington

HISTORY.

THE Sisters of Charity of Providence made a foundation of the Order in the Territory—now the state of Washington—in 1856, leaving Montreal, Canada, for New York, thence by way of Cape Horn coming to the "Oregon Country" and landing at Vancouver, Washington, on the Feast of Our Lady's Immaculate Conception. Pioneers in the work of the religious orders in the Northwest, with the growth and development of the country, the Sisters of Charity of Providence established branch houses in the principal cities wherever their services were most needed.

As early as 1875, the Jesuit missionaries who labored among the Yakima Indians earnestly pleaded for Sisters to assist in the work of Christianizing the savages and to teach the children of the white settlers in the valley. The Columbia basin was still but a wilderness of sage brush where bands of hostile Indians lurked to intimidate the encroaching white man. With no railroads, the only mode of travel was by steamboat and stage. Having undergone great hardships to reach the new foundation, three Sisters opened a school at Yakima City in September, 1875. The Sisters frequently visited the Indian mission fifteen miles distant, where the Jesuit fathers maintained their headquarters, to keep together their Indian neophytes. The Sisters exercised all the works of mercy in the little settlement and among the Indians.

It is related in the Chronicles of 1875-1876 that a poor Indian in the last stage of tuberculosis begged the favor of being allowed to pitch his tent on the convent grounds, where he could spend the remainder of his days under the care of the Sisters and be by them prepared for a happy death. In all charity the Sisters gave the desired permission, and for three months the sick man was tenderly nursed by those who vied with one another to bestow upon him their ministrations of mercy and kindness, and finally closed his eyes in the peace of the Lord.

With the advent of the Northern Pacific Railway in 1885, a new town sprang into existence. The railroad officials offered free transportation of their dwellings to those settlers who desired to locate on the new town site. There was a rush for locations and the

ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH., IN 1923.

old town was gradually depopulated. The Sisters abandoned their first foundation, acquired a block for school purposes, and erected a brick building suitable for a boarding school and parochial work. The Sisters often felt keenly the pinch of poverty, but their fortitude and constancy in the midst of the greatest hardships and privations remained unshaken. The poor and the sick of the town were visited regularly, and the most needy were often provided for from the Sisters' slender means. Charity brought the Sisters in contact with all classes and conditions of people.

Then came the great irrigation projects financed by the United States government, destined to bring under cultivation thousands of acres of the most productive land in the United States. To meet the necessity of hospitalization for the employees, Dr. T. B. Gunn of the Reclamation Service, formally petitioned the Sisters to open a hospital in Yakima. St. Elizabeth's Hospital, founded August 2, 1891, is one of a group of hospitals in the Northwest conducted by the Sisters of Charity of Providence. The foundation house, located at the corner of Naches and Yakima Avenues, was a dwelling rented until better accommodations could be provided. Two Sisters were detailed to put the house in readiness for the reception of the sick, the first patient being admitted on August 25, 1891. A month later the first operation was performed on the kitchen table, no furnishings for an operating room having yet been provided. The operation—the amputation of a limb—created quite a sensation throughout the city and attracted many visitors to the hospital.

OLD ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

On August 23, 1892, the Sisters took possession of a two-story frame building erected on Block 65 at the corner of Fourth and E Streets, adjacent to the now flourishing St. Joseph's Academy and parochial school. Within ten years two additions were built to accommodate the ever-increasing demands for hospitalization. In the second new wing, erected in 1902, a good operating room with modern sterilizing equipment, was installed. There was no laboratory and of course no X-ray. The total bed capacity was now 65. With the growth of the city and the development of the country, the success of the hospital became widely known, so

that its capacity became taxed to the limit and every inch of space had to be utilized to meet the pressing needs. The government reclamation, still in process of construction, attracted hundreds of laborers to seek employment along the ditches. With irrigation typhoid became a yearly epidemic throughout the valley. To meet the emergency of caring for the numerous fever victims, three large screened house tents were fitted up as wards A—B—C, and in these the typhoid cases were treated and nursed back to health. No case of illness, however poor or forsaken, was ever refused admittance to the hospital, and despite the cramped quarters there seemed to be "always room for one more."

Eventually a new building became an absolute necessity, and after having struggled for twenty years to care for the sick of the valley with totally inadequate housing facilities and equipment, the larger vision of the Sisters of Charity of Providence planned the present splendid modern structure. As the residential section of Yakima was rapidly extending westward to a more elevated part of the city, the Sisters felt the need of securing a more desirable location, removed from the noise of railroads and the business district. A block was purchased on Capitol Hill and the cornerstone of the new St. Elizabeth's was laid April 13, 1913. Work progressed so favorably that the new edifice was completed and ready for the reception of patients January 1, 1914. The building is constructed of red brick and stone, practically fireproof, five stories high, with an extreme length of 207 feet and a west wing of 140 feet. The "big red house on the hill" stands as a sentinel in the midst of choice homes, commanding a view of the surrounding valley, now under high cultivation, and of three snow-capped mountain peaks of the Cascade range.

NORTH VIEW OF ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

Since the foundation of the institution 22,900 patients have been cared for.

Upon the completion of the hospital, Rt. Rev. E. J. O'Dea, Bishop of Seattle, thought the time auspicious to establish a new parish in the city. The hospital chapel was thrown open for use as the parish church until such time as a temporary building for church and school purposes could be erected. Thus St. Elizabeth's served a double purpose for about a year, the pastor of St. Paul's parish being at the same time chaplain of the hospital.

To the reverend Jesuit fathers who have served as chaplains from the foundation, the Sisters are most grateful for their untiring efforts in administering to the spiritual needs of the sick and to the general welfare of the institution. Special mention must be made of the name of Rev. J. B. Raiberti, S. J., the first chap-

THE CHAPEL, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

PORTICO, MAIN ENTRANCE, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

lain, who for seven years with the greatest devotedness brought peace and the blessing of God to departing souls, until his own summons came on September 1, 1899.

THE HOSPITAL BUILDING.

The location of St. Elizabeth's Hospital is well removed from the noise of main thoroughfares, lending a quiet, restful atmosphere to the patient. On approaching the portico, crowned by a marble statue of St. Elizabeth of Hungary, one is impressed with the imposing simplicity of the structure. Entering the vestibule, a well furnished reception room attracts the visitor. To the right an attendant handles the telephone private exchange and courteously answers all requests for information. In close proximity are the business office and private offices. Facing the main entrance is the elevator.

The north half of the first floor is taken up by the chaplain's apartments, with private exit to the street; the nurses' reception room, study hall, library, superintendent's office and dining room. The south half is devoted to the record room, pharmacy, Sisters' community room, library, dining room, and a social service room. At either end of the main hall are broad stairways leading to the floors above. In the west wing are located the dining rooms for employees, supply rooms, refrigerators and a well equipped kitchen. An automatic elevator is operated from the main kitchen to convey food to the diet kitchens on each of the four floors.

The second floor is given over entirely to the care of male patients. A concession is made, however, during periods of typhoid fever, when women and children are also accommodated in private rooms in the south wing which is specially equipped for the care and treatment of fever cases. On the second floor there are also private quarters with all conveniences reserved for the intern. At the rear of the elevator in the west wing, a beautifully appointed chapel invites one to retire from the busy hospital corridors to spend a few silent moments in prayer.

The wards on the third floor receive women patients only while either women or men may occupy the private rooms. The north wing is reserved for medical cases. The west wing provides sleeping quarters for the Sisters, also a large screened porch for those who desire to sleep out of doors.

The fourth floor furnishes the same number of rooms and wards as the third and is devoted entirely to women patients. One ward in the south wing is reserved for the overflow of maternity work. The west wing houses the student nurses.

LECTURE HALL, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

PART OF THE NURSES' DINING ROOM, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

The west and south wings on the fifth floor furnish fifteen private rooms for the exclusive use of maternity cases. The delivery room and sterilizing room are fitted with all the latest scientific equipment for the proper care of obstetrical patients. The nursery, well lighted and ventilated, is furnished with twenty white enameled cribs and a specially designed baby incubator. The department is under the constant supervision of a trained nurse.

in sufficient quantity to supply the needs of the institution. At the close of the canning season the fruit cellars constitute one of the show places.

General Features.

On each floor there are suites of rooms with private bath in connection. Built-in lockers may be found in every room and corridor throughout the building. Four floors are given entirely to the care of the sick. On each floor is to be found a surgical dressing room,

ONE OF THE MAIN OPERATING ROOMS, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

The north wing of the fifth floor is devoted entirely to the department of surgery. There are two major operating rooms with a sterilizing room between. A third room is used for minor work. In connection with the doctors' scrub room there is a shower bath and other conveniences, lockers, and instrument cabinets.

The laboratory and X-ray departments, in charge of a qualified technician, on the same floor, are easy of access and available at a moment's notice for any investigation during an operation.

For the staff of nurses doing night duty accommodations are provided on the sixth floor, consisting of screened sleeping porch, dressing rooms and bath room. The location is removed from all disturbing noises from within and without.

In the north wing basement, conveniently located near the elevator and ambulance entrance, is an up-to-date autopsy room. In the west basement, a dietetic classroom is maintained. There is also ample storage space for provisions, and during the fruit season a large cannery takes care of the peach crop and other fruits

provided with sterilizers, scrub sinks, an operating table, supply cupboards and other requisites. All medicines are dispensed from a utility room, in which is located the signal light indicator, and closed-in telephone station.

Two service towers furnish each floor with baths, toilets, utensil racks, utensil sterilizers, hoppers, ice containers, clothes chutes, and dust chutes connected with incinerator; in fact, all that goes to make for convenience and sanitation. Private rooms and wards have excellent lighting and ventilation, with cheerful homelike surroundings. Rates are moderate, to suit all classes and conditions. The total patient capacity is 145.

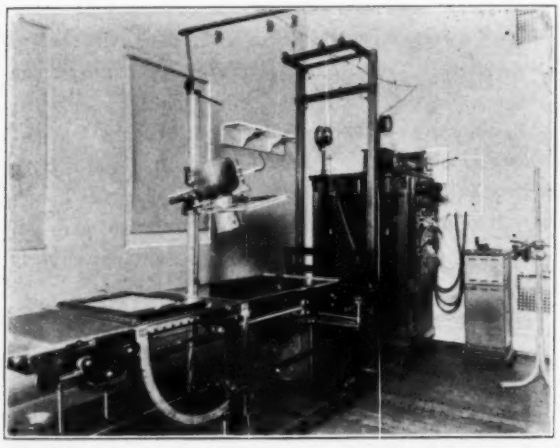
A licensed engineer is in charge of the heating plant, steam laundry and ice plant which are maintained in a separate building, connected with the hospital by a tunnel eight feet wide through which soiled linen is trucked to the laundry lift and fresh laundry is carried to the elevator for distribution.

SECTION OF THE LABORATORY, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

The Sanitarium.

St. Elizabeth's Sanitarium is a one-story frame building occupying the southwest corner of the hospital grounds. It is built with ample screened porches, designed specially to give outdoor treatment to patients afflicted with tuberculosis. There are several private rooms in which cases requiring isolation receive the proper care. Heat is supplied from the central heating plant and food is obtained from the main kitchen. There are beds for 23 patients. An average of fifteen patients per day is maintained the year round. These are about equally divided between part-pay patients and county indigent cases afflicted with tuberculosis. Clinics are held every three months by the State Anti-Tuberculosis League.

The sanitarium feature in connection with the hospital is an exception, for in few localities are the two purposes combined—care of general hospital cases and care of tuberculosis patients. Here the student nurse is afforded an opportunity to receive training in the care and treatment of tuberculosis, seldom found in private schools of nursing.



A CORNER OF THE X-RAY ROOM, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

SECTION OF THE LABORATORY, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

To the loyalty of the doctors of Yakima who have always given their unqualified support to St. Elizabeth's Hospital the institution is indebted for the distinction it now enjoys of having served the people of Yakima and surrounding valley for 31 years without a rival, although several attempts were made to open a second hospital in the city. This feature bespeaks the confidence reposed in the Sisters of Charity of Providence, who have given to the work their undivided service and whose lives have been dedicated to the alleviation of suffering humanity. In the reception of patients the hospital has always been nonsectarian, and is open to all in need of medical care. The growth and development, and the high reputation which St. Elizabeth's Hospital has attained among the laity as well as among the medical profession, are proof of its success and of the good accomplished by the devoted workers.

STANDARDIZATION OF ST. ELIZABETH'S.

In the spring of 1919, when Dr. John G. Bowman toured the Pacific coast for the purpose of interesting hospitals in the movement for standardization, although Yakima was not privileged by a visit from the delegates of the American College of Surgeons, nevertheless the spirit of the college was grasped, and a decided impetus was given the movement by the Yakima representatives who attended the Seattle conferences. Immediately the management of St. Elizabeth's Hospital put forth every effort to meet the minimum requirements for standardization.

The following November about forty physicians responded to the invitation of the Sister Superior and a staff was organized. The laboratory already in operation was reinforced and a record department was established with a full-time record-keeper. Thus adopting all the minimum requirements, St. Elizabeth's Hospital met the fullest approval of the first inspector sent out

by the college, and immediately received recognition as one of the standardized hospitals having already complied with the plan adopted by the College of Surgeons.

For the first year the program of the monthly staff meetings consisted in clinics, papers by specially appointed members of the staff, and reports of the different committees. Although satisfactory to a certain extent, these meetings did not, however, arouse sufficient interest to insure a good attendance. At the second annual elections a program committee was added. The committee did good work but the attendance did not increase, and there was a lack of enthusiasm. At the annual elections in November, 1921, a new phase was an attraction. A detailed review of the month's work introduced which has intensified interest and proved is presented to the staff at each meeting. Wide discussion takes place, the work is thoroughly analyzed in a friendly spirit, all restraint eliminated and the doctors

FIRST COMMUNION DAY OF TWO PATIENTS IN THE SANITARIUM.

talk freely about their own cases. This procedure has met with a great deal of success and furnishes much information to all present.

The Sisters always manifest their interest in the staff meetings by assisting in large numbers. This custom was introduced at the very outset and does much towards maintaining solid unity and cooperation. Helpful criticism is invited by the management in order to improve and advance the hospital technique and to make the work as efficient as possible for the betterment of the patient. The hospital is to be congratulated on the good feeling existing between the doctors and management, which has made possible the splendid results accomplished. The recognized efficiency which St. Elizabeth's Hospital has attained through standardization may be taken as an example of what can be done with an open staff in a rural town.

The Record Department.

The record department is in charge of a salaried graduate nurse, giving full time to the work under the

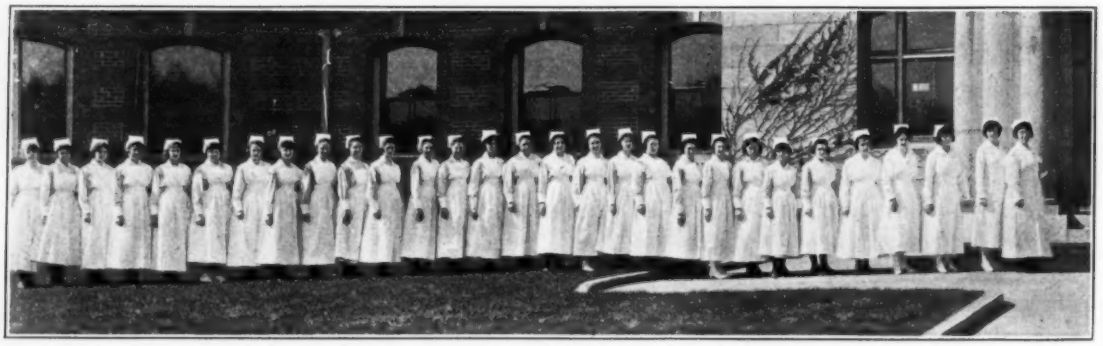
ST. ELIZABETH'S SANITARIUM, YAKIMA, WASH.

direct supervision of the Sister Superior and the record committee. The simple forms which were adopted upon the establishment of the department have remained unchanged. A new feature of the past year is the completion of the filing system by the addition of two cross files. The classification of diseases makes it possible to secure a group of cases of any one disease desired for research or statistics. The causes of death according to the international nomenclature completes the cross files. The forms used and the manner of filing the records are in harmony with the plan adopted by the Sisters of Charity of Providence, which is uniform throughout their standardized hospitals.

THE SCHOOL OF NURSING.

The St. Elizabeth's School of Nursing was opened in 1907 with four candidates. The first years were full of difficulties owing to the very limited space for accommodations. The classes were restricted to a small number of pupils. The movement was new and few applications were made. With the first graduation more interest was aroused and in a short time the nurses numbered ten. The Sisters each in turn qualified as R. N's. This was a stimulus for each class of nurses to pass the State Board Examinations for Nurses and register. The school has had a steady growth and has graduated sixty young women. Pupil nurses are on duty nine hours a day. The curriculum for the schools of nursing of the Sisters of Charity of Providence is

A CORNER OF THE RECORD ROOM, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.



CLASS OF NURSES, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

uniform in all their hospitals and covers a period of three years. In St. Elizabeth's School the theoretical instruction pertaining purely to nursing is given by the Sister Directress, while the practical nursing is done under the supervision of registered Sister Nurses who supervise the different floors and departments. A regular course of lectures by members of the staff covers the various subjects of the curriculum. Candidates for admission are required to fill out a blank questionnaire which is furnished upon request by the Sister Directress, who in every case requires also a personal interview with the applicant, who is furthermore required to present a letter of recommendation as to her moral character and physical condition. The school of nursing is registered in the state of Washington. St. Elizabeth's Hospital is registered A-1 by the American College of Surgeons.

The present housing facilities have become wholly inadequate for the number of applicants. The crying need of the hour—a home for student nurses—the management hopes to supply before very long.

The Laboratory at St. Elizabeth's Hospital, Yakima

J. F. Devane, Technician

There is no denying the fact that hospital standardization, by its requirements of the members of its staff and by the willingness of such standardized institutions to place at the command of all the doctors every convenience for the proper feeding, nursing and care of patients, together with adequate laboratory facilities for aid in diagnosis, is productive of better work from all the doctors patronizing such standardized institutions. The personal interest of every doctor in his hospital's "Class A" rating and the knowledge that this high rating can only be attained and held by the individual and collective interest of all who are connected with the hospital serves as a common, uniting interest and promotes a better spirit for mutual aid among the visiting staff.

Every department of St. Elizabeth's Hospital feels the change and can see the great improvement that has been wrought during the two years since the standardization of this institution. No department perhaps is able to notice a greater change than does the laboratory, as is evidenced by the ever-increasing demand for laboratory work, by the more satisfactory results obtained, and by the knowledge on the part of the physicians and surgeons that they are more and more making use of the greatest of all aids in the treatment of the sick.

In the care of the sick we must ever strive to eliminate as much as possible the element of chance, the vagaries of the personal equation, egotistical views and beliefs. This can only be done by reasoning from the known facts. In arriving at our diagnoses, methods of treatment, and prognosis, our mental processes are very complex, but without all the known facts in every case they are little better than unrelated ideas. So it is that of nursing of the Sisters of Charity of Providence is to the laboratory falls the work of ascertaining facts; and the facts—when ascertained—form the only foundation upon which it is safe to allow our reasoning to build a superstructure, i. e., correct diagnosis, rational treatment, as well as the advancement of ourselves scientifically. For this reason the visiting staff of this hospital is coming more and more to realize that it is but folly to attempt to form a diagnosis, or outline a method of treatment, without first getting together all the facts which can be ascertained in the laboratory.

Prior to the standardization of St. Elizabeth's Hospital, Yakima had never had adequate laboratory facilities to care for the needs of the medical profession. Each individual doctor was doing his own routine urinalysis and occasionally blood counts, while the sputum examinations, throat cultures, Widals, etc., were being done by the city health office. To have a Wassermann test made, it was necessary for the doctor to collect the blood and send it to Seattle or Spokane for examination. The delay in getting reports from specimens sent away, together with the time consumed by the busy doctor who attempted to do his own work, was the direct cause of the loss of much valuable in-

formation that could only be discovered by the proper laboratory examinations here in the city. Also the lack of facilities had led many of the doctors into the direful habit of arriving at a diagnosis from physical findings alone, so that when the laboratory began to function there was apparently little demand for its use. However, this apparent lack of demand for it was caused only by the fact that some of the doctors had accustomed themselves to getting along without it.

When arrangements were being made to standardize St. Elizabeth's Hospital the management engaged the services of a trained bacteriologist and serologist to take charge of the work in the hospital. When it became a rule of the hospital that a urinalysis should be made for all cases admitted, a blood count for all surgical cases, a bacterial culture for all cases of infection, the laboratory began to justify its existence. These examinations were made without waiting for the orders of the attending physician and the doctors soon became so accustomed to see the reports on the charts of their patients that, when these reports were not ready, due to some delay, immediate demand was made for them. The satisfaction of having the laboratory facts before them grew upon the medical profession, and the requirements placed upon the technician for outside work also grew, until it was found necessary to form a partnership with another reliable worker and establish a fully equipped laboratory in a city office to take care of the outside work. It is the policy of the laboratory workers to make every effort to meet the growing demands of the profession.

At present the laboratory is recognized by all the visiting staff as one of the most important departments of the hospital, in fact a good laboratory is one of the essentials of any hospital. The increasing usefulness of our laboratory, together with the splendid cooperation of the other departments of the hospital has made the efficiency of St. Elizabeth's Hospital an established fact.

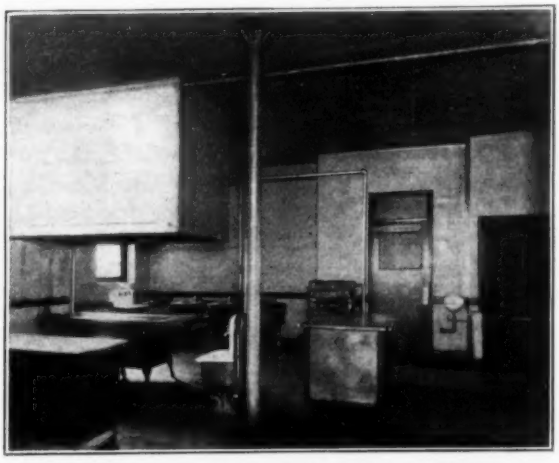
The value of the Wassermann test as an aid to diagnosis has become so apparent that serological tests are run daily. An interest in blood chemistry is being manifested and some work has been done along this line since the necessary equipment for the work has been installed. Another recent addition to the laboratory equipment is the latest type of apparatus for making basal metabolism determinations.

With its excellent equipment the laboratory is prepared to do all kinds of clinical, chemical, bacteriological and pathological work.

The Prevention of Typhoid Fever

H. H. Smith, M. D., Health Officer, Yakima, Wash.

Typhoid fever is a sanitary problem of first magnitude, especially in this country, where it is unduly prevalent. We are to be criticised for the condition existing, for in the United States typhoid fever stands fourth on the list of mortality tables. We have throughout the country from 250,000 to 300,000 cases annually, about one in every 400 individuals, with from 25,000 to 30,000 deaths, or a fatality of ten per cent. This condition existed during the year 1910 and was not exceptional or extraordinary.

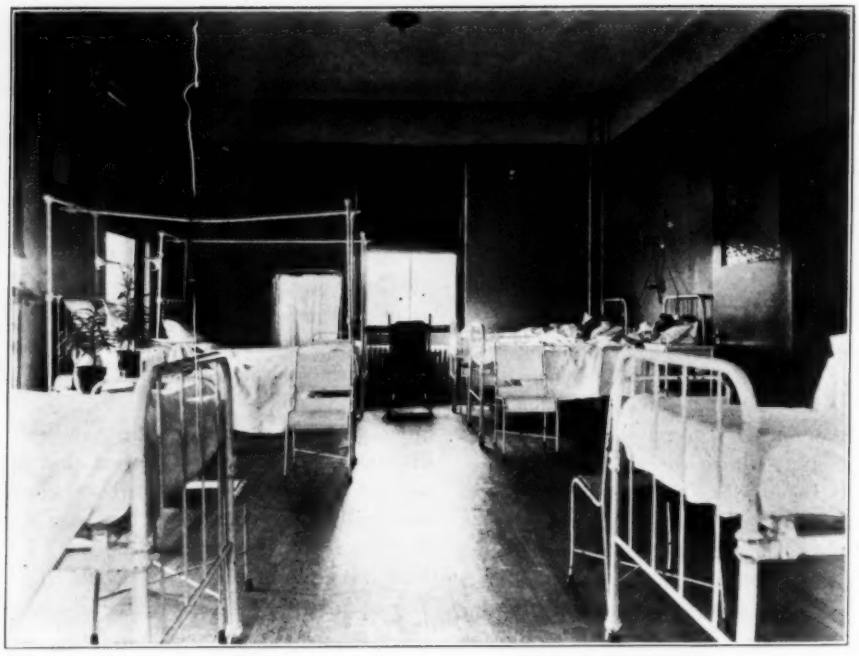


A SECTION OF THE MAIN KITCHEN, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

Let us compare the rate of prevalence with some of the European countries for the period from 1900 to 1904. The annual death rate per 100,000 population was in Scotland 6.2; Germany, 7.6; England and Wales, 11.2; Belgium, 16.8; Austria, 19.9; Hungary, 28.3; Italy, 25.2; while in the United States for the same period it reached the appalling rate of 45.5.

Fortunately conditions have improved in the last decade, and the rate has been very materially reduced. The control of the water, milk and food supplies with sanitary reforms has shown decided results.

Our attitude toward the disease is inconsistent; familiarity has bred a remarkable indifference to typhoid fever. We should consider that every case of typhoid fever means a short circuit between the alvine discharges of one person and the mouth of another. The attending physician has a dual duty to perform; one is to assist the patient, the other is to protect the community. Much harm has been done by insisting that the disease is infectious, but not contagious; it is both—that is, communicable. The carrier plays the important role as in most of the communicable diseases. Were it possible to eliminate this source, the disease would practically become extinct. From two to four per cent of all cases continue to shed the bacilli in the urine or feces during and after convalescence. Every case of typhoid should be instructed to disinfect the stools for



A MEN'S WARD, ST. ELIZABETH'S HOSPITAL, YAKIMA, WASH.

a period of not less than six weeks after a normal temperature.

Unfortunately for the control, we have many carriers without a clinical history of the disease; we have three kinds of carriers: acute, chronic and temporary. An acute carrier is one who continues to discharge the bacilli not longer than six weeks following convalescence; a chronic carrier longer than six weeks, and possibly for many years, with cases reported, where they have continued to discharge them during their entire life, regardless of surgical and medical efforts. A temporary carrier is a person who has not had clinical typhoid, but who discharges the bacilli for a short period. It is estimated that one person out of every thousand is a carrier. More cases are traced to women than to men, due to the fact that they are employed to a greater extent in the preparation of foods.

The prevention of typhoid may be summed up in the word "cleanliness," physical and biological cleanliness; that is, not only clean food, especially water and milk, but cleanliness of the person and his environment. The country is our weakest link in the sanitary chain. Each rural home represents in miniature the wholesale problem of the city. Typhoid within cities with protected water, milk and food, and modern sanitary measures, is almost negligible. It is possible for all of us to drink safe water, if we will; better none, than indulge in one unsafe drink. A safe milk supply can be secured in the rural home if intelligent care is observed. Flies can be practically eliminated by cooperation. Convalescents should not be given their liberty until the danger of bacillus carrying has passed. Four successive negative results at intervals of several days should be required in the examination of the stools.

Regardless of education, sanitation and prophylaxis, we have in our rural section the usual typhoid curve. Nearly all water supplies for domestic use during the irrigation season is unsafe, with the exception of cisterns where they have been properly treated and protected.

Old Nuns

Elizabeth M. Blish.

Our Lady smiles on youthful nuns,
She loves them well.
Our Lady's smile like sunshine floods
Each convent cell,
But fondest falls Our Lady's smile
Where old nuns dwell!

Old nuns whose hearts are young with love
For Mary's Son,
Old nuns whose prayers for faltering souls
Have victories won,
Old nuns whose lives are beautiful
With service done.

Their love a loveless world has saved
From God's dread rod,
The paths where Sorrow walks with Sin
Their feet have trod,
Their knees have worn the flags that paved
The house of God.

Our Lady smiles on youthful nuns,
She loves them well!
Our Lady's smile like sunshine floods
Each convent cell!
But fondest falls Our Lady's smile
Where old nuns dwell.

Ethical Principles for the Character of a Nurse—II

The Elements of Character

James M. Brogan, S. J., Missoula, Montana.

(Continued from December Issue)

TO attempt an analysis of anything is simply to try to determine the elements that compose it. The elements that enter into the building of character are partly given us as an inheritance from our parents, partly belong to our human nature, and are in part acquired by education, training and development.

Inherited Traits.

The natural endowments, the inborn tendencies which come with our bodies from our parents, constitute what medical science would call our psycho-physical constitution. The other elements, and these the chief ones, will depend on our early training, our education and self-discipline, especially in the formation of good habits, the training of the will, and the conformity of our conduct to a high ideal. These other elements, the acquired ones, may be called the psycho-practical part of character, we leave their treatment for another lecture.

We take first our inherited traits. It was Goethe who said a man should use much wisdom in choosing his parents; but an American humorist expressed it more pointedly when he said that a man should be extremely careful in the choice of a grandfather. It is only another way of saying we are much indebted to our parents and our ancestors for the foundation of the best that's in us. We do not always appreciate nor are we grateful enough to the kind Providence of God for the heritage of good healthy bodies and the good that comes to our moral make-up through long generations of self-control and sanctity and noble, clean living in our parents and ancestors. "Kind hearts are more than coronets" and some of our kind-heartedness has come down to us as an inheritance or at least as a tradition.

Temperament.

We call these physical inherited tendencies our "temperament"; because as natural qualities they are so mixed or blended in us that they "temper" one another. Various or diversified as they are in different individuals, men of science have sought to classify them. Aristotle, the Philosopher, reduced them to four classes, and since his time, some men of science have varied the classes. Galen made a special study of temperaments, and in recent years Dr. Antonelli resumed the work of his predecessors, even designating the complexion and color of hair that is coupled with certain temperaments. The learned R. J. Meyer, S. J., gave us, in English dress, a good part and the most practical part of the conclusions reached on the subject up to his time; French writers have done much on the study of character and temperaments, but for our purpose we follow, as most helpful, the division given by Meyer. The temperaments, therefore, that we deal with will be, the choleric or bilious, the phlegmatic, the melancholic, the ardent or sanguine, and the nervous. No two persons have exactly the same temperament, and whether the difference comes from the blood, the nerves, the tissues, or the cells, has not been clearly determined. A study of the types may give a knowledge of our own disposition, and help us to make the best of our inheritance.

Choleric Temperament.

The choleric temperament was supposed to result from a superabundance of bile in the system. It is distinguished by strong affections, strong passions, great energy, boldness and tenacity of purpose. Quick and resolute in emergency, it loves to wrestle with difficulties, and forms the natural basis of those strong characters who lead and rule others. It wins the confidence of the timid, overcomes the hesitation of the cautious, puts energy in the languid, and breaks down opposition by the resistless impetuosity of a determined will. When controlled, it is remarkably successful, but if it gets beyond control, it becomes haughty, self-reliant, and self-sufficient. It has taken a stand and will not yield. If placed over others and still uncontrolled, it is domineering or crushing; it is the material of which despots and tyrants are made. It is then self-opinionated, never submits to reason, will not take advice, and will easily fly into a rage. If the choleric individual fails or falls from power, she frets and chafes like a caged lion, and if humbled, feels it very keenly. The individual with such a temper predominating, has no middle course; she seems destined to be very high or very low, Cæsar or nobody, an angel or a demon.

A goodly share of this temperament in a character is desirable, provided it be held in control and kept ready for use at the proper time. Shakespeare makes his character, the fiery Cassius, wax wroth "when that rash humor which his mother gave him made him forgetful "especially when grief and blood ill-tempered vexed him" and yet showed him "yoked with a lamb, that carries anger as the flint bears fire, who, much enforced, shows a hasty spark, and straight is cold again." The character that has very little of the choleric never shows "temper," but neither does she show much courage in adversity, she "never sets the world on fire." It is well for some people that they inherited a good share of fight in their nature, it helps them through trials, and tides them over the shoals and rough spots of life.

Phlegmatic Temperament.

The phlegmatic or cold-blooded temperament is much the opposite of the choleric. The supposed cause of the type was a watery fluid in the blood that was called lymph. The individual who possesses it is free

from violent passion, is habitually staid and deliberate, is slow to begin, slow to give up, does not promise easily, but if she does, trust her implicitly, she will redeem the promise. She is calculating, steady, cleanly, orderly, laborious, and painstaking.

But if she possess too much of the phlegmatic, she procrastinates, never does today what can be put off till tomorrow; she comes late and loses opportunities, is over-cautious and sees the lion in the way, is afraid to risk an undertaking; in the extreme form she never begins anything and may sink finally into all but complete mental inertia. Even if she does not, she may become so dull and torpid as to seem ice-cold, and will diffuse the chill by the very touch of her hand, the sound of her voice; and the cold stare in her look will tend to freeze the blood in your veins, and to stay all the courage and energy of your soul.

We do not meet many who possess the trait to this excess; and if the temper or disposition be kept within reasonable bounds, it is clear-sighted and fair-minded, it is excellent to give counsel, and will prove a lasting and true friend, as good as gold, as constant as the North Star. Moreover, where there is perfect mastery of feelings, the owner of this trait is generally good-natured and even-tempered, has no variable moods of sunshine and cloud; she cannot be surprised, for she is always the same; imperturable, unaffected by surroundings, she possesses her soul in peace; she is a person of few words but these few will be well-weighed and generally encouraging.

Melancholic Temperament.

The melancholic temperament was supposed to arise from black bile in the system. Hence the etymology of the word. Its possessor is over-afraid of evil, over-anxious and very often depressed in spirit. Resembling in some respects the choleric, she may at times display much energy and boldness and tenacity of purpose, at least along certain lines within certain limits and under certain conditions. But she has a vivid fear of evils to come, be they real or imaginary, physical or moral. They will engulf not only herself and her companions, but society at large as well; and the picture is made gloomy, "the sky may fall down." She will be then what we call in common language, "a crepe hanger." To her mind the poor of the world are wretched, degraded, helpless, without remedy; the rich are living in luxury, haughty, cruel and corrupt. She may seek a remedy for the evils; it will call for self-sacrifice, but no matter, she will be the martyr.

Now this view of things properly studied, is the view that starts the reformer, good or bad, false or genuine, religious or social; and it is always the background for the harangue of the walking delegate or the political demagog. But it is one-sided and partial, and, of course, with the temper we are considering, it is liable to abuse. Such an exaggerated view will affect the disposition physically, and will magnify dangers beyond all proportion. "There is a tempest in every cloud, a torrent in every rivulet, the world is all wrong, entirely evil and irredeemably lost; all its roses have thorns under the leaves, its joys are only other forms of melancholy, its sunshine is mockery, its life is incessant death, we have no right to smile at anything, there is a curse everywhere, everything is danger for there is sin everywhere." This train of thought has its further effect, the melancholy girl becomes moody, pensive, discouraged; there is no use trying, it is all useless. Then all courage, all zeal, all energy and ambition are gone.

But a melancholy temper without excesses in a girl has its useful phases. She exercises a great influence on companions and acquaintances. She is not harsh, but tender and compassionate, modest and unassuming. She is not feared but rather loved; she has a certain mysterious fascination on those around her. Like those plaintive airs in which the minor tone prevails, she touches a sympathetic chord in the hearts of others and they respond to her will; but, of course, in the excessive form, such a disposition is very unwelcome. In its possessor, too, it becomes pessimistic and cynical, and if conscience did not restrain it, might even end in suicide.

Sanguine Temperament.

The ardent or sanguine temperament is sufficiently defined by the word "ardent" which means warm, and the word "sanguine" which means abounding in blood. It is distinguished by vivid emotions, great activity and buoyancy of spirit. The girl with a sanguine temperament is generally sprightly, warm-hearted and generous. The merry laugh announcing her coming and the smile that lights up her face when she is present are both magnetic and contagious. The cheerful word, the look, the presence, dispel gloom and draw the hearts of others towards her. She is the best, the most cheery, the most sociable of companions, happy herself, she makes others happy. She is all life and activity, and must have an outlet for it. She is resourceful and quick to seize opportunities—while another would be thinking and planning what to do, she has done it. Following the inspiration of genius, she may do much, may accomplish a great deal by a few bold strokes, but seldom will she have the perseverance to execute a finished work. Sanguine means hopeful; now hopeful she is certainly, and takes the sunny view of life, always pictures it for herself in the rosiest of colors. She is too light-hearted to be discouraged, or if despondency threatens her, she flings her troubles to the wind.

"What is the use of repining?
Where there's a will there's a way;
Tomorrow the sun may be shining,
Although it is clouded today."

It is a pity there is a limit to such a cheerful glowing temperament; but there is, and at times a dangerous limit. We do not find it constant; it will change,

for it is as unsteady as quicksilver and being imaginative and impressionable, it may vary as the clouds on a windy day. You may come one day to find your sprightly good-natured favorite all gloomy and downcast. She is easily cured it is true; but then do not rely too much on her promise or her advice, as she will pass from one side of the question to the other with amazing facility and upset all your plans.

Neither is this temperament a pledge of final success, as it may lack calculation, and being too hopeful, it may not prepare for the storm that rises unexpectedly or for the difficulty that may crop up any moment; and thus unarmed, because she is not forewarned, our sanguine girl may fail. Life has stern realities, and we must be ready for them, and it may happen that a life begun with fair promises may end in failure and the consequences may be very bitter. Happy those who can "come smiling through." The girl with a sanguine temperament needs a strongly trained will; for, with a vivid imagination, a love of pleasure and excitement, a quick response to poetry and music, she may be overconfident, and be easily misled, and carried over the bounds of moderation, she may venture far and reap bitter regrets. But with a trained constancy of will and a practice of the right principles, well grasped, the character resulting from such a temperament could be amiable and excellent.

Nervous Temperament.

Our last type of temperament, the nervous, is frequently met with today, and frequently, too, with deficiencies. We saddle the blame for it on the nerves. It manifests great nervous sensibility and alertness of body and mind, a delicacy of perception. If controlled, this temperament has many advantages over those of coarser fiber. It is quick and impressionable, and keenly alive to all that is happening round about. Its possessor is like an Aeolian Harp, she is stirred by every passing breeze, her senses are affected by the slightest change and give forth a response which seems to come from the inmost soul. Because she is exquisitely sensitive, she has a delicate regard for her neighbor's feelings, and a graceful way of showing it. There is none quicker to discern what is agreeable to others and becoming to herself. There is no one better to minister relief to the sick and consolation to the afflicted. Her heart is as tender, her voice as soft, her touch as gentle as those of a mother when she soothes her suffering child; and to crown her kindness, she does all with an ease, a simplicity of manner, a good grace, which makes it seem a personal favor to her to accept a service from her hands. She is by nature noble, and shows her nobility always in due season.

But the danger is that her sensitiveness may get the best of her; and when it does, look out for squalls. It were better there be no one near her when the break comes. She loses all control of self; she depends, of course, on her nerves and they depend on her sleep, her digestion, and a thousand other unforeseen circumstances. "Her spirits go up and down like the mercury in a barometer." If you come upon her suddenly she will be all fluttered, the lips quiver, the brow darkens, the storm is going to break. She is irritable, impatient, discontented, no one knows why; and she will give vent to her feelings in lamentations, it may be in hysteria, or she will hurl invective at you for your attempted kindness. You can never tell from day to day, from hour to hour, in what mood you will find her. It may be 'twas some imaginary slight, some salute omitted, or some suspicious smile caused the ill-humor, but there's no use trying to patch up the matter, it cannot be done. You may learn how "to trace the day's disaster in her morning face" and try to avoid her. But to no use; she is too suspicious and too sensitive to live contented even with the most patient friends. It is a pity that a girl goes to this extreme of temperament, as she suffers much and makes others suffer as well.

I hope it is evident enough that I have here described a habitual temperament and not a person who is suffering from over-work or from a strain that has wrought up the nerves to the breaking point, or brought on an acute attack of neurasthenia. The nurse or the patient so afflicted is suffering from insomnia, is peevish without cause, has a dull aching in the back of the head, a depression of spirits that brings her to cry like a child in a pout, or at least, brings on the crying mood, and she is worried about matters of no account. This is a pathological condition but it is pathetic also, and it calls for a change of some kind, some good rest and fresh air and sleep, and then more rest and more sleep. It came on slowly and may linger for weeks until the nerves are rested.

Unusual Types.

With these observations abbreviated from Meyer's chapter on temperament I commit the study to your diligence. You know some young women who are even more extreme than the types I have described. There is the domineering imperious woman who imposes her will and her ways on every one within reach. She may be a "Maggie Jiggs" with her sleeves gathered up, a rolling pin stoutly grasped to batter down anyone who dares to differ with her. She will give a piece of her mind to every offender. Usually this type has not much mind to give away, and what she gives is not wholesome. Then you know some cross-grained characters, the shrew or the termagant, who is armored with barbed thorns, worse than the quills of the porcupine. Touch her not. You know the trouble-maker who peddles tales and sows discord, the eternal busybody who can do nothing without upsetting the whole house and letting the city know about it, and then finds she has done it wrong anyway. You know another so bitterly choleric in her hatred of some one that her hatred eats her heart out. She will assume an attitude of fair play and seem to regret the incident, but it must be of such a one that Alexander Pope wrote that line: "In face an angel, and in soul a cat." Her rivals must be

crushed by fair means or foul, they must have no friends, she will go out of her way to poison all minds against them, they must be hounded and to the bitter end. If detraction will not serve the purpose, calumny will; and if calumny would be glaringly against the truth, then some stinging insinuation must at least cast a shadow over the enemy to blacken her character.

"A whisper woke the air,
A soft, light tone, and low,
Yet barbed with shame and woe,
Ah! might it only perish there,
Not further go!
But no! a quick and eager ear
Caught up the little meaning sound;
Another voice has breathed it clear,
And so it wandered round
From ear to lip, from lip to ear,
Until it touched a gentle heart
That throbbed from all the world apart
And that it broke.
It was the only heart it found,
The only heart 'twas meant to find
When first its accents woke.
It reached that gentle heart at last,
And that—it broke."

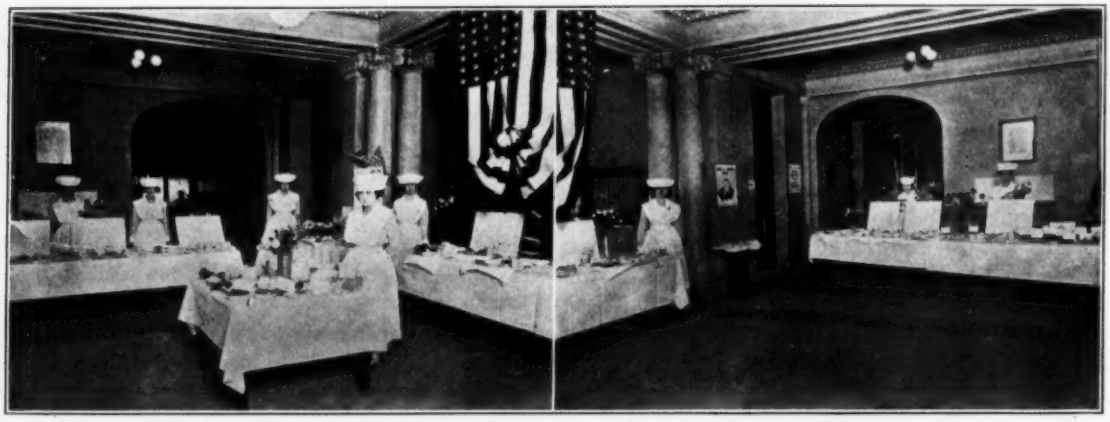
I need not describe the slovenly, untidy individual, who, in the Gaelic language, is called a "sthreel," nor need I mention the foolish girl who rates herself very low and goes the broad way to dissipation till death calls her prematurely and she comes to pass away in the hospital. She failed because she had no character. Indeed, I hope that those unclassified individuals who are set on the wrong path will not be admitted to train for the profession of nursing, as it requires sterling womanly qualities and strong character to be a prudent and successful nurse.

Finally, this description of natural tendencies shows that if we allowed them to grow rank without training or pruning, they might lead to great excesses. There are some investigators who would have us believe there is a criminal type which from inheritance cannot be but criminal. It is true that there is transmitted a hereditary tendency to evil; but in almost all cases it is corrigible, and will yield to a good education and proper training. When tendencies are controlled by the will and kept within the bounds of reason, they will not predominate but be tempered and moderated to an upright and useful life.

A Pleasing Variety.

It is well for us, at all events, that there is a variety of tendencies, the variety that adds spice to life. The wise Providence of God has so planned it. A variety of climate accounts in part for the variety of plants and flowers and fruits that delight the eye and gratify the palate; so does the variety of tastes and talents and the different tempers of races and nations lead men and women to different avocations and all contribute to the variety and harmony, the grandeur and beauty of the moral universe. Life would be monotonous indeed, if we were all constituted alike and all attempted to do the same thing. All would be nurses and doctors, and no one a patient. God has willed that individuals and peoples be mutually dependent; and he has so distributed his gifts, that no one can boast of having inherited all that is good in human nature. Take then, nurses, what God has given you and make the best of it. Try to combine in yourselves as far as possible the best you find in tempers and nationalities. You cannot couple contradictory traits, but you might try to embody in your ideal, inasmuch as a trained will can acquire them, the energy and determination of the choleric, the self-control and constancy of the phlegmatic, the tenderness and sympathy of the melancholic, the light-heartedness and vivacity of the sanguine, the delicacy and gentle manner of the nervous, and the resultant will be a noble specimen of womanhood, a perfect character.

The next Lecture will be: "Human Faculties to Train and to be Trained for Character."



DIET DISPLAY AT CREIGHTON MEMORIAL ST. JOSEPH'S HOSPITAL, OMAHA, NEBR.

This display included typical meals and illustrated the wide variety of diets served in the treatment of disease. It attracted much attention on the part of visitors and formed a feature of the Florence Nightingale day observance.

Bacteriology and Applied Immunology—IV

Robert A. Kilduffe, M. D., Pittsburgh, Pa.

(Continued)

APPLIED IMMUNOLOGY.

The Practical Application of Immunology in the Treatment of Disease: Vaccines and Serums.

The importance of an understanding of at least the principles of immunology becomes at once self-evident if we are to understand the action of vaccines and serums used in the treatment of disease.

There are several reasons why, at least, an elementary knowledge is necessary of the methods of preparing an immune serum for use in the treatment of disease.

First, the nurse will frequently, particularly in hospital work, be called upon to assist in their administration and, in emergency, may have to give them herself. In order to do this intelligently she must know something of what they are and how they act.

Second, the peculiar relation of the nurse to the public gives her a wonderful opportunity to assist in their education along the lines of preventive medicine and to overcome the objections and prejudices based upon ignorance. In order, therefore, that the nurse may not only understand the implements she may be called upon to use, but also be able to explain their mode of action to others, a brief description of the preparation of an immune serum follows.

Preparation of Immune Serums.

The Animal: For several reasons the horse is the animal most frequently made use of in the commercial preparation of immune serums. First, because this animal is susceptible to infection and reacts to the injection of bacteria and their products; second, because it is of sufficient size to withstand the withdrawal of large amounts of blood; and, finally, because, generally speaking, horse serum is relatively innocuous when injected into the human body.*

The animals are carefully chosen, and rigidly examined, and tested for disease, notably anthrax, glanders and tuberculosis. Having been proven to be healthy, they are first kept under observation under conditions approximating those of a well kept hospital with well regulated diet and exercise, a daily temperature record being kept. After a suitable time sufficient to rule out the incubation period of any acute infectious disease, they are ready for the injection of the antigens.

The Antigens: These are the substances which, when injected, will give rise to the production of antibodies. They vary in type according to the type of antibody desired and the mode of attack most common in the production of the particular disease.

In diseases whose effects are largely due to soluble toxins produced by the causative agents, the toxin is used for injection; where an endotoxin is at fault, the killed organisms are injected, or both methods may be combined.

An antigen, therefore, may be the bacteria, their products, or both combined.

Bacterial Antigens: These consist of graduated, increasing doses, first, of a suspension of the bacteria which have been killed by heat or chemicals (phenol), later followed by suspensions of living bacteria which have been weakened by exposure to heat of a degree sufficient to injure but not kill them, and, finally, by suspensions of living, unchanged, virulent bacteria, thus utilizing both the endogenous and exogenous bacterial toxins.

Antigens Consisting of Products of Bacterial Growth: These are mainly soluble toxins and are produced by growing the bacteria in suitable culture media, killing them with phenol, and removing their bodies by filtration so that the finished product contains *only the soluble toxins* in the liquid culture media. These toxins are then injected in gradually increasing doses.

Immunization:

The healthy animal, with all possible precautions as used in a hospital operating room, is injected with the antigen in gradually increasing doses at suitable intervals, generally five or seven days apart, in the meantime being carefully observed as to temperature and general physical condition.

Receiving at first a small dose, the animal eventually receives without harm a dose far greater than that ordinarily fatal, being protected by the antibodies produced during the course of injections.

At intervals the animal is bled in small amounts and the serum tested for its antibody content. When this is satisfactory the animal is bled in large amount and the serum which is separated constitutes the immune serum containing large amounts of antibodies specific for the antigen used in the injections.

Standardization of Immune Serums:

It is evident, of course, that it is not possible to measure the dosage of these products in the same manner in which the dose of drugs is determined; nevertheless, in order that we may have some method of determining the strength or potency of the various serums, a method of standardization is necessary.

For certain serums, notably antimeningococcic and antipneumococcic, no satisfactory method of standardization has as yet been devised, so that the dosage of these products is purely by volume, as much being given as possible.

For tetanus and diphtheria antitoxins, however, a standard of strength has been adopted which is the *antitoxic unit,* so that we speak of injecting so many thousands of *units* of these antitoxins.

*See Anaphylaxis.

To establish this standard the smallest amount of toxin required to kill a guinea pig weighing 250 grams in four days is first found. This is known as the *minimum lethal dose* or M. L. D. of the toxin. Next, the smallest amount of antitoxin is determined which will neutralize this amount of toxin and so is sufficient to protect a 250 gram guinea pig against its fatal action for four days.

A unit of antitoxin is one hundred times the amount of antitoxin required to protect a 250 gram guinea pig against a lethal dose of toxin.

Preservation of Immune Serums:

After titration and standardization to determine its strength, the serum is tested for sterility by culture (aerobic and anaerobic), and by animal inoculation, particular attention being paid to the detection of the tetanus bacillus, and then further protected by the addition of small amounts of phenol or tricresol and stored in sterile containers.

Concentration of Immune Serums:

Investigation has disclosed the fact that, to a large extent, the antitoxic bodies are largely contained in the globulin fraction of the whole serum; in other words, only a certain portion of the albumins of the serum seem to contain them. Consequently, it is now a practice, in order to lessen the bulk of the injection and to lessen the likelihood of untoward reactions, to precipitate the globulins from the whole serum and utilize them alone for the injection.

From what has been said of the method of preparation it should be obvious that it is not possible to carry or cause the particular disease by the use of immune serums so that a common objection to their use by the laity is groundless.

Their value in the treatment of disease is now a matter of common knowledge. By the early injection of antitoxin in sufficient amount, tetanus and diphtheria may be prevented, and diphtheria and meningitis cured. The results in other diseases in which immune serums are used as a method of treatment, while not so brilliant as in the case of those just mentioned, are still of great value.

Vaccines:

In the use of immune serums we endeavor to give the patient a *passive* immunity; by the use of vaccines we desire to produce in the patient an *active* immunity due to the stimulation of his own immunity-producing mechanism through the injection of the causative agent so modified as to be incapable of causing the disease itself.

The term "vaccine" without any qualification usually refers to that used in the prevention of smallpox, and the term *"bacterial* vaccine" should be used to denote all others. The word "bacterin" has lately been introduced but, as it would seem to imply some extract of bacteria, its use should be discouraged.

Bacterial Vaccines:

A bacterial vaccine is a killed suspension of bacteria in normal salt solution.

Bacterial vaccines may be:

(a) Monovalent: consisting of one strain of one organism.

(b) Polyvalent: consisting of numerous strains of the same organism.

(c) Mixed: consisting of several kinds of organisms.

(d) Stock: made from laboratory cultures obtained from sources other than the patient.

(e) Autogenous: made from bacteria grown from the patient's own lesions.

Preparation of a Bacterial Vaccine:

The organism or organisms from which the vaccine is to be prepared are grown in *pure culture* on a suitable culture medium for a sufficient length of time to secure a luxuriant growth.

The growth is then washed from the surface of the culture medium with sterile normal salt solution, centrifuged to throw down the bacteria, resuspended and again centrifuged, this procedure being repeated several times in order to wash the bacteria and remove extraneous material derived from the culture medium. The washed bacteria are then finally suspended in sterile normal salt solution in a sterile tube. From this tube a small amount of the suspension is removed for standardization and the remainder of the suspension subjected to the action of heat (56° C. for one hour) to kill the bacteria. The suspension is then tested for sterility, suitably diluted in sterile normal salt solution and a small amount of phenol added to preserve sterility in the finished vaccine, which is then preserved in small sealed ampules or sterile bottles.

Standardization of a Bacterial Vaccine:

This is accomplished by actually counting the suspension under the microscope and then diluting it so that each cubic centimeter will contain a known number of bacteria, generally about one thousand million.

A comparatively recent development is the use of what are known as *sensitized vaccines.* These are bacterial suspensions which have been brought into contact with an immune serum prepared against the particular organism with the idea of allowing the antibodies of the serum to act upon the bacteria which are thereby rendered more sensitive to the defensive forces of the body, are thus more readily destroyed, and so hasten and facilitate the production of antibodies in the patient's own serum.

Cowpox Vaccine:

The exact relationship existing between cowpox and smallpox and the exact nature of the causative agent of these diseases has not as yet been discovered. Nevertheless that vaccination with cowpox vaccine will protect against smallpox—a fact first demonstrated by Jenner in 1796—is proven beyond a doubt.

As the exact nature of the causative agent of cowpox is unknown we are unable to grow it in pure cul-

ture in a test tube in place of which the body of a susceptible animal is utilized.

Young and healthy calves are chosen and, after elimination of disease by a rigid physical examination and the performance of tests for glanders, anthrax, and tuberculosis, are kept under observation under conditions of absolute hygiene and sanitation.

They are then taken to an operating room and the abdomen prepared as for a major operation. The vaccine "virus" is rubbed into numerous linear scarifications, and the animal returned to the stall with suitable precautions to prevent secondary infections or contaminations other than those with organisms present in the skin.

After from five to six days, when a good crop of pustules has developed, the animal is killed and the pustules removed by curettage. An autopsy is then done on the body of the animal and, should any sign of communicable disease be found, the vaccine is discarded.

The vaccine pulp is then sterilized by the addition of four times its volume of chemically pure glycerine and the thoroughly triturated mixture allowed to stand until animal inoculation and cultural tests show the absence of bacteria, especially the tetanus bacillus. The vaccine is then tested for potency by the vaccination of rabbits on the cornea and, if satisfactory, is stored under sterile conditions in sterile containers, generally capillary tubes.

Antirabic Vaccine:

The use of the Pasteur antirabic vaccine in the treatment and prevention of rabies or hydrophobia is based upon the theory that if, during the incubation period following the bite of an infected animal, the production of antibodies could be stimulated in the patient, the virus introduced into the wound could be neutralized, or its effects neutralized, and the virus itself finally destroyed.

This theory has been successfully established in animals and in the human being and the method is in general use.

Because of the fact that the causative agent of hydrophobia has not as yet been established, it is not possible to grow it in pure culture and the virus is propagated and maintained in the bodies of animals, generally rabbits.

The first step in the process of preparing the "vaccine" is the preparation of a virus of such virulence that it will uniformly kill in eight to twelve days. This is attained by the successive passage of the virus through animals and such a virus is called a "virus fixé."

In institutes devoted to the preparation of antirabic vaccine two or more rabbits are inoculated daily by injection under the dura with a virus fixé so that a series of animals is always on hand in stages of the disease one day apart. When the infected animal dies the cord and brain are removed under aseptic precautions, a portion of the cerebellum used to carry on the inoculations, a portion of the cord cultured to prove its sterility as far as bacteria are concerned, and the remainder dried over sodium hydroxide at a temperature of 20° C to 25° C.

There is thus always on hand a series of cords varying in age from one to fourteen days.

The "vaccine" is made by thoroughly triturating and emulsifying one centimeter of such cords in three cubic centimeters of normal salt solution to which 20% of glycerine and 0.5% of phenol is added.

The average dose is from 2 to 2.5 c.c. of such an emulsion given subcutaneously in the abdominal region. The injections are given daily for twenty-one days, beginning with the oldest cord (14 days) and working toward the youngest (2 days).

There is some local reaction at the site of the injection consisting of redness and some degree of induration but abscess formation never occurs.

Administration of Serums and Vaccines:

Serums are administered hypodermically or by gravity injections, and may be given subcutaneously (the more usual method), by intravenous injection, intraspinally, or, rarely, by subdural injection.

Under certain circumstances, as in desperate cases of meningitis, intravenous and intraspinous methods of injection may be combined.

Bacterial vaccines are given by hypodermic injection and are always administered subcutaneously in gradually increasing doses with suitable intermissions to allow for the subsidence of any reaction following their injection.

Vaccination against smallpox is always done by scarification, the vaccine virus being rubbed into the abrasions thus produced.

(To be continued)

"SUNSHINE PELLETS."

By Doctor W. F. Thomson, Pathologist, Hotel Dieu, Beaumont, Texas.

Detection now, of minor ills, will save a lot of Doctor bills.

Prevention is profit, treatment expense.

Life in the open, with the reel and the rod defers occupation of our six feet of sod.

The tuneful mosquito is a musical tragedy.

If, in life, we'll read the rules of the road, we'll find it not often we'll need to be towed.

What the sun finds the Doctor loses.

According to Scriptures,
The fellow who stuffs
His stomach with vituals
Will pay in the rough.

With no mat at the door, for dusting your feet, the dust on the floor is the filth from the street.

Cleanliness, without carbolic acid, is more efficacious, as a disinfectant, than carbolic acid without cleanliness.

When there's smallpox around, vaccination beats vacillation.

Better one pit on the arm than a thousand on the face.

First thine own self vaccinate, and 'twill follow, as the night the day, that thou then canst not infect any man.

Who prefers smallpox to vaccination has never tried the former.

There is a lot more tonic in sleep, song and soup than there is in sulpher, sassafras and sarsaparilla.

As the blood is, so is the brain, the bone and the brawn.

Drugs have a definite place of usefulness in the hands of the physician. It's the promiscuous, useless drugging that's to be decried.

The Value of the Hospital Laboratory: to the Patient, to the Physician, and to the Modern Hospital[1]

Georgine Luden, M. D.
First Assistant in Cancer Research, Mayo Foundation, Rochester, Minnesota.

GRANDMOTHERS are often heard to remark: "Times certainly are changing." The grandmothers are perfectly right. The whole world today is in a period of reconstruction and reorganization and the science of medicine is sharing the fate of the world at large. Innumerable inventions and discoveries have made life much more complex than formerly; the proper care of the sick has become perhaps one of the most complicated problems. The physician today is obliged to consider many factors, which he could ignore with a clear conscience some twenty years ago when their value had not yet been definitely established. Their value has now been conclusively proved; therefore, the physician must worry about them. The hospital is the right hand of the physician, and if it is to prove a useful right hand, it must assume its share of the worrying. That is one consideration.

There is another important point. Medical men are becoming more and more aware that the big, visible manifestations of disease are the result of causes incredibly small. Picture to yourselves the pathetic invalidism to which a powerful young man, six feet tall, may be reduced by tuberculosis. Then think of the cause of the disease, the bacillus of tuberculosis, which is so small that it must be colored by laboratory methods, and magnified nearly a thousand times by the microscope before it can be seen. Pneumonia, malaria, the pus in wounds, as well as a host of other diseases, are all the work of tiny organisms which are absolutely invisible without the help of the laboratory and the microscope. The bacillus of influenza is even smaller than that of tuberculosis, but nearly everybody knows how ill influenza can make one, and how many persons have been killed by it.

Not all diseases are caused by germs. A diabetic patient is often very sick; there is too much sugar in his blood, and sugar appears in the urine, as we all know. But, how much more sugar is there in the blood of a diabetic patient than in the blood of a healthy person? All the blood in the body of a normal adult, approximately 5000 c.c., just about half fills an ordinary kitchen pail. In health that half-pailful of blood contains one teaspoonful of sugar; in severe diabetes it contains from three to twelve teaspoonsful. If one teaspoonful of sugar were put in half a bucket of water, the water would certainly not taste sweet; this shows how small is the amount of sugar with which the body works.

There are many other chemical substances in the blood besides sugar. The blood, in fact, reminds one of a rather elaborate salad dressing, such as the famous "thousand island," which contains many ingredients. We cannot consider here the many ingredients of the blood, but the table gives an idea of how small the amounts of the ingredients are in that half-pail of blood.

The blood also carries a very minute amount of "electricity"; we call this the hydrogen-ion concentration. This is another thing which can go wrong in the blood with sad results for the patient. The electricity of the blood is exactly like that which produces electric light; both consist of electric particles (ions) so small that it is hard to imagine their size. The following will give an idea of it. Electricity is fairly expensive, but Professor Millikan, of the University of Chicago, has shown that if we could take an amount of electricity costing just one hundred-thousandth of a cent and could make all the inhabitants of Chicago, 3,000,000, count the particles in that small amount of electric current, the whole population of Chicago would be kept busy counting for no less than twenty thousand years.

Small as the electric particles are, the fact that there are either "too few" or "too many" of them in the blood makes a difference in the patient's welfare. If there are too few we call the blood "acid," and the patient suffers from "acidosis." Patients with acidosis are poor operative risks; they do not stand operations well; acidosis also occurs when the diabetic patient

[1]Presented before the Minnesota and North Dakota State Conference of the Catholic Hospital Association, December 5-6, 1922, St. Mary's Hospital, Rochester, Minnesota.

TABLE 1. Relative and total amounts of important chemical constituents in normal blood (adult, body weight 154 pounds).

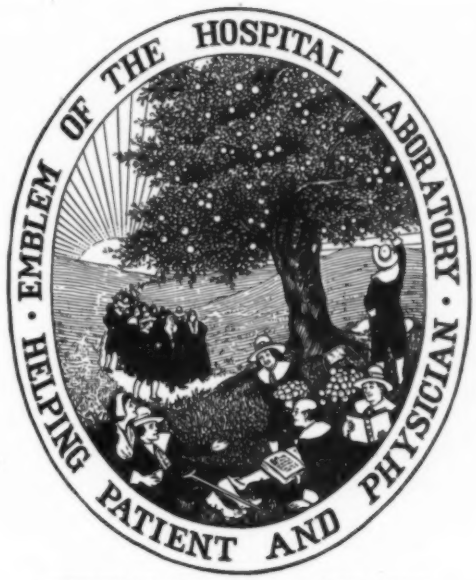
	For each 100 c.c., mg.	For total volume (5000 c.c.) mg.	gr.	Equivalents.
Iodin	0.013	0.65	0.01	Average dose of atrophin or hyosin.
Creatinin	1.0 to 2.0	50 to 60.0	1 to 2.0	Average dose of ferrous lactate.
Uric acid	1.0 to 3.0	50 to 150.0	1 to 3.0	Caffein or aloes.
Acid Phosphorus	2.0 to 6.0	100 to 300.0	5.0	Small dose acetylsalicylic acid (aspirin).
Lipoid Phosphorus	6.0 to 12.0	300 to 600.0	10.0	Large dose acetylsalicylic acid (aspirin).
	mg.	gm.	gr.	
Urea	20.0 to 40.0	1 to 2	15 to 30.0	Average dose sodium bromid or quinin (malaria).
Sugar	80.0 to 120.0	4 to 6	60 to 80.0	1 teaspoonful.
Cholesterol	10.0 to 140.0	4 to 6	60 to 80.0	24 egg yolks.
Sodium chlorid	650.0	32	480.0 (1 oz.)	1 tablespoonful.
Fat	100.0 to 720.0	5 to 36	60 to 480.0 (1 oz.)	1 teaspoonful to 1 tablespoonful.

passes into coma, and diabetic coma generally means that the patient is going to die. When there are too many electric particles in the blood, we speak of "alkalinosis"; this occurs in certain kinds of suffocation. The most acid blood, however, is really not any more "sour" than distilled water, and the most alkaline blood is simply like tap water, as Dr. Rowntree has shown. Acidosis, blood sugar, and the germs of diseases can only be traced and shown in the laboratory.

Perhaps you are thinking: "This is all very interesting, but is it really of much use in our everyday hospital life?" To show that laboratory work is of practical value, we will consider, (1) what the laboratory does for the patient, who always comes first, (2) what the laboratory does for the physician, and (3) what the laboratory does for the hospital.

What the Laboratory Does for the Patient.

Instead of boring you with all kinds of true, but more or less dull arguments, let me tell you the story of two patients, whom I knew personally. A girl of 18 came to the hospital ward in Europe in which I worked. She did not look particularly ill, but she could not talk above a whisper. We "overhauled" her to the best of our ability; she was sent to all the departments for examination. Her throat looked only slightly red as far down as the throat specialist could see. Her lungs were in splendid condition, and everything else was negative. The diagnosis of "hysterical aphonia" was made, which is merely a grand way of saying that the girl's loss of voice was more or less imaginary. We resent being told that our troubles are "only imaginary," and the girl was very unhappy when the situation was explained to her; she tried her best to talk above a whisper; she simply could not do it. Prof. Friedrich von Müller, a famous clinician, and the professor under whom I was working at the time, had said something in a lecture which I recalled, although the girl's case did not resemble that described by him. The girl had no cough, but I told her to keep in a bottle for me any phlegm or mucus that she happened to bring up. She was very conscientious about it. For eleven days this mucus was made into smears, stained and studied under the microscope, morning and evening, with wholly negative results. My chief, the first assistant, made many sarcastic comments about "wasting my time on that phlegm." He was engrossed in some research work which had to be carried on in another part of the building, and he hated to be called away from this work. It was, I confess, with wicked glee, that on the twelfth day I came to ask his opinion about a specimen under the microscope for it took him away from his beloved experiments, down many long corridors to our clinical laboratory. After one glance into the microscope he exclaimed in great disgust, "I did think that you would know a tuberculosis bacillus when you saw one." To this I humbly replied that I merely wanted my suspicion confirmed, because the specimen belonged to the girl with the imaginary loss of voice. The laboratory proved



EMBLEM OF THE HOSPITAL LABORATORY.

to be the salvation of this girl; it did away with any "imagination" on her part, for she had tuberculosis of the larynx in a very early stage. She was sent to a sanitarium and made a complete recovery.

The other story concerns an old lady, a great friend of mine, although my work prevented me from seeing her often. She bumped her foot against a sharp corner, taking the skin off. The slight injury refused to heal. A doctor was finally called; he prescribed complete rest and local treatment. When I saw my old friend again she had been kept on a sofa for three months (much to her fury, as she was very energetic), and all sorts of ointments had been tried on the foot without effect. As our professor always impressed on his students the importance of looking for diabetes when injuries, especially in elderly persons, refused to heal, I begged my friend to consult the professor without giving her the exact reason. He tested the urine, found six per cent of sugar, put the patient on a diet, and the foot healed completely in less than three weeks. The old lady did not have a severe type of diabetes; she had simply been eating more sugar and cakes than her body could handle. She lived for years in excellent health on the mildest of diabetic diets. Here again, a very simple laboratory test proved to be of the greatest value to the patient.

What the Laboratory Does for the Doctor.

This can be told in seven words: it helps him to help the patient. The two stories just related were not chosen at random; they are typical examples, because tuberculosis and diabetes are two of the most prevalent diseases. Without the help of the laboratory the doctor would have continued to believe that the poor girl was suffering from an "imaginary" condition, and her trouble would not have been discovered until much later, when the chances of recovery would have been much smaller. But for the chemical test the old lady

might still be on the sofa with a variety of ointments on her foot. And this is not all. A surgical operation performed on a patient who is not "sugar-free" is likely to give rise to serious complications; both the incision and the field of operation will show little sign of healing. I recall such a case in another place abroad where I worked. Sugar determinations were made routinely for all patients. In this instance some one blundered; either the reports got mixed or the person responsible for the test forgot to make it and called it negative. The surgeon, trusting the negative finding, performed a major operation, a total hysterectomy; the patient nearly died during the operation and her wound behaved abominably afterwards. It was then found that she had severe diabetes. I leave you to imagine what the surgeon said about it; the whole staff was in disgrace for a week and the air was "blue." But we all felt that the surgeon had had quite as unfair a deal as the patient.

I shall not enumerate all the diseases and all the laboratory tests known in modern medicine. You will find an excellent summary of these in HOSPITAL PROGRESS, July, 1922, in a paper by Dr. F. G. Ellis, in which the tests needed under given conditions are described. For details concerning laboratory work the manual of Cummer[2] is both clear and convenient as well as complete; there are many other books of this kind, but I like Cummer's best.

What the Laboratory Does for the Hospital.

There are two sides to this question: we might call them the material and the spiritual or ethical sides; one represents the practical advantages to be derived by the hospital from the laboratory, the other the moral obligations which the hospital assumes by undertaking the care of the sick.

Hospitals, as well as individuals, are faced by the economic problem of "making both ends meet." Consequently, the hospital must consider the question: Does it pay to have laboratories? This question has been answered in the affirmative by writers who know far more about financial and administrative details than I. But there are a few ordinary, common-sense considerations concerning the up-to-date physician, the public, and the rising generation of medical men, to which I would like to call attention.

1. The up-to-date, well-known physician or surgeon fully realizes that the laboratory helps him to help his patients; he is going to "fight shy" of the hospital in which laboratory work is not done, and will send *his* patients to hospitals which provide what he needs. That the fame of the surgeon or of the physician brings patients to the hospital, and that a hospital needs patients to "keep going" financially, you know as well as I; and St. Mary's Hospital is a living illustration of these facts.

2. The public, that is the patient, whom the hospital needs, in order to prosper, is no longer incapable of judging the value of proper medical care. In the olden days people were afraid of the hospital, or thought it a disgrace to go there; this feeling is a thing of the past. The health campaigns have done much to educate the public in this respect. The patient now demands efficient medical care just as much as good railway service. The hospital which provides the best care will be popular, the hospital which does not, will soon find itself "out of the running."

3. The coming generation of medical men are being taught the value of the laboratory, during their studies at the University and during the internships in hospitals which the state requires of them before they are allowed to practice. They grow up with the laboratory, so to speak. Do you think that these men of the younger generation, the brilliant men of the future, will settle in places or work with hospitals lacking laboratory facilities? They certainly will not, if there is any way out. The lack of physicians in rural districts is now being discussed in all medical journals. Physicians flock to the cities, leaving the rural communities sadly in need of help. I do not think that it is the comfort of city life only, which makes the doctor shun the country. A well trained physician realizes that he needs the help of the laboratory in his work; he can get it in the city; he cannot get it in the country unless a clinic or a hospital provides it.

One cannot but sympathize with the mental distress of the conscientious physician dealing with a "difficult" case, who finds it impossible to secure the laboratory data at the moment he needs them and who knows that such data would help him to deal with his problems. The fear of having to work in the dark, to the detriment of patients, doubtless keeps many good physicians out of country practice. Hospitals with laboratory facilities might do much to solve the difficulties of rural districts.

What about the spiritual or ethical aspect of the hospital laboratory? Hospitals are founded for the purpose of caring for the sick. When a hospital receives a patient it tacitly assumes the moral obligation of doing its utmost to make that patient get well. Neither hospitals nor individuals can ignore the command, "Whatsoever ye do, do it with all your might." Modern medicine has proved conclusively that the laboratory is needed in the proper care of the sick; no hospital, therefore, can ignore the laboratory and meet its moral obligations. The trend of medicine is to pay more attention than formerly to the chemical aspects of diseases. Chemical analyses can be carried out only in laboratories. Today even cancer is beginning to be considered from a chemical point of view; the Imperial Cancer Research Fund in London is employed in studying the chemical aspects of cancer; in Paris a new hospital with a laboratory for special investigation of cancer chemistry has just been opened. In every journal for cancer research you will find articles dealing with chemical problems. Formerly the microscope was the most powerful instrument for the diagnosis of cancer: the patient was, so to speak, "put under the microscope."

[2]Cummer, C. L.: A manual of clinical laboratory methods. Philadelphia, Lea and Febiger, 1922, 484 pp.

In a few years the cancer patients will be "put in the test tube," as is being done with diabetic patients with excellent results, and the test tube is part of the laboratory.

In order to encourage some of the smaller hospitals, that may be getting horribly worried at the prospect of all the demands modern medicine is going to make on them, let me show you a picture which, to my mind, is the emblem of the hospital laboratory, and also the image of St. Mary's Hospital here in Rochester. It is the picture of a tree. Trees spring up from very small seeds; St. Mary's started from a very small beginning, its laboratory was tiny at first. You can see for yourselves how it has grown. If the smaller hospitals will only plant the seed of their laboratory today, and look after that seedling as St. Mary's Hospital has done, then the first, and the most difficult step will have been taken. Trees have a habit of growing.

The Problem of Renovating Gauze[1]

1. In order to portray as strikingly as possible just why gauze renovation pays in dollars and cents, the accompanying tabulation was prepared. It illustrates the line of consideration to be followed in determining the advisability of washing gauze in individual hospitals.

In this table, comparable steps are balanced, thus relieving us of the task of computing the cost of every step and requiring only the calculation of the cost of the unbalanced items. An inspection of the table shows that the items of labor in the gauze room must be compared with the cost of new gauze to an amount equal to the total gauze used. These two figures are relatively simple for every hospital executive to obtain and a comparison will indicate clearly whether gauze renovation is desirable or not for that particular hospital. The cost of labor in the gauze room ($3,900), was calculated on the basis of five full time hospital helpers with a half time supervisor, at $100 per month or $50, chargeable to gauze.

Why Gauze Renovation Pays.

In the following table, comparable steps in gauze use are indicated and balanced where an equality exists:

New Gauze.	Washed.
1. Delivered to gauze room or operating room from store room.	1A. Delivered to gauze room from laundry.
2. Opened, laid out and cut into sizes for dressings.	2A. Pulled.
3. Made into dressings.	3A. Made into dressings.
4. Made into packages, counted and stacked.	4A. Made into packages, counted and stacked.
5. Wrapped and marked.	5A. Wrapped and marked.
6. Sterilized.	6A. Sterilized.
7. Delivered to wards.	7A. Delivered to wards.
8. Used as dressings.	8A. Used as dressings.
9. Collected.	9A. Collected.
10. Delivered to incinerator.	10A. Delivered to laundry.
11. Burned.	11A. Washed.
	12A. Autoclaved.
	Balance against No. 2.

It is noted that No. 2A is greater than No. 2, so we have considered No. 2 in comparison with No. 12A. All items are balanced except No. 2A (Pulled). This item then must be considered in comparison with the cost of new gauze to take the place of the washed gauze used.

The figures indicating this relation in one hospital are:

Gauze used—New	115,255 yards
Washed	772,655 yards
Total	887,910 yards

Cost When Renovated—New Gauze.

115,255 yards @ .032	$3,688.16
Labor in gauze room	3,900.00
Total cost	$7,588.16

Cost When Not Renovated—New Gauze

887,910 yards @ .0285	$25,440.66
Saving by washing gauze	**$17,852.50**

Note that the price of the new gauze purchased for washing is figured higher than the new gauze purchased for single use, in order to allow for a better quality for washing.

General Considerations.

In considering gauze reclamation, a primary consideration is its practicability in relation to other hospital activities. The washing of gauze results in more or less accumulation of the washed products and it must be determined that this gauze is of value in one or more of the following three ways:

a. By replacing new gauze.

b. By replacing other materials more expensive.

c. By securing more efficient results from the use of gauze that has been reclaimed: viz., in labor charges, equipment, etc.

1. *Practicability.* The uses of washed gauze are very extensive and should be developed to the highest degree possible without creating artificial demands. The normal demands must be consistent enough throughout the year to prevent undue accumulation of washed gauze.

These are all questions that must be considered if any hospital executive is to form an intelligent opinion regarding the practicability of gauze renovation. It is the firm belief of the committee that a fair investigation of the merits of gauze renovation will show that it is practicable in a vast majority of hospitals if not in all hospitals.

2. *Advisability.* In considering the advisability of gauze renovation the committee wishes merely to call your attention to the experience of one hospital that is renovating gauze. The exact figures are given in the first paragraph. Note that this hospital in question used approximately a million yards of gauze and yet

[1]This paper constituted the report of the Special Committee on Gauze Renovation of the American Hospital Association, and was presented at the twenty-fourth Annual Conference at the Atlantic City Convention, September, 1922. The committee included the following:

A. B. Denison, M. D., Chairman, Lakeside Hospital, Cleveland, O.; Miss Claribelle Wheeler, Mt. Sinai Hospital, Cleveland, O.; Sister Cornelia, St. Vincent's Hospital, Cleveland, O.; Sister Patricia, St. Vincent's Hospital, Cleveland, O.; Sister Amadeus, St. John's Hospital, Cleveland, O.; Sister Agnes Therese, St. John's Hospital, Cleveland, O.; Guy J. Clark, Cleveland Hospital Council, Cleveland, O.

purchased a little more than a hundred thousand yards. Note also the saving in this one instance of about $17,000.00 in one year in spite of the fact that all the labor was paid labor. If these results are obtainable in this one instance and similar results occur in other hospitals washing gauze, there is no apparent reason why renovation of gauze would not effect a similar saving in hospitals in general. If the hospital has volunteer labor in any amount, the saving would be even more striking. These figures certainly challenge the attention of every hospital man.

3. *Weight of Gauze to be Used—Gauze Balance.* In determining the weight of gauze to be used for reclamation purposes, one basic relation must be considered; viz., the gauze balance. The experimental work done by the committee shows beyond doubt that the higher counts of gauze stand the wear and tear of washing better than the low count gauze. Consequently the use of high count gauze results in a slower shrinkage of the reclaimed gauze supply. Before accepting this statement literally as indicating the use of high count gauze, attention must be given to the gauze balance or the relation between new and reclaimed gauze. It is obvious that there must be a balance between new and renovated gauze. A proper gauze balance is a point where the normal shrinkage of the reclaimed gauze supply is just balanced by the amount of new gauze put into circulation through various channels. The latter factor is pretty nearly a fixed quantity while the former is fairly easily controlled, depending very largely upon the count of gauze washed.

The gauze balance, therefore, may reasonably be considered as an accurate index of the weight of gauze to be used. It is obvious that the factors entering into the determination of this balanced relationship cannot all be calculated in advance, so each and every hospital must work out by actual experience the value of the various component factors and by adjustment arrive at the proper gauze weight. The recommendation of the committee, therefore, is briefly to use the lowest count gauze that maintains the gauze balance. The experience of the majority of the members of the committee has been that the higher counts of gauze are more satisfactory and economical. A count of 24x20 meets the requirements in most cases where we have record. However, this is no guarantee that 24x20 gauze will be satisfactory in every hospital.

4. *Method of Reclamation.* The primary consideration in the method of reclaiming gauze must be that two basic requirements must be met; viz., sterility of the dressings and a certain degree of absorbency. At the same time one must keep in mind that once these requisites are secured, the method must result in as little wear as possible and that it must not pile up a large labor cost that would counterbalance any saving effected by gauze renovation. That these factors are all possible of attainment is proved by the experience of hospitals washing gauze. At the same time, there is no rigid uniformity of laundry methods. This leads us to conclude that the method of reclamation is nothing occult at all but merely the application of ordinary principles of sterilization and laundry.

Therefore, we will give no detailed method of reclamation as our recommendation, but will outline a typical process here.

The gauze is collected on the wards in heavy net bags hung in garbage cans. The bags are heavy enough to stand washing and the gauze is not removed from the bags until it reaches the gauze room. In the washer the gauze is subjected to these steps:

1. Rinsed in several changes of cold water (4-5 changes) until the water is clear.
2. Four inches of warm water—2 pounds of soda and 2 pounds of soap (powdered). Run thirty minutes.
3. Rinse through two changes of hot water.
4. Four inches of water—3 pounds of soda and 2 pounds of soap. Boiled hard for twenty minutes.
5. Rinse through three changes of boiling water.
6. Rinse through two changes of cold water.
7. Extract for fifteen minutes.

The figures given in 2 and 4 are for a medium sized washer.

Repeated bacterial tests have shown that the gauze is absolutely sterile at this point but some hospitals subject the gauze to another sterilization in the large bedding and mattress sterilizer. This is hardly necessary, however, and most hospitals omit this step. The gauze is then sent to the gauze room, slightly damp, where it is pulled out flat.

The average time required for all these processes is about an hour and a half total in the laundry. This does not mean, however, that the entire attention of a laundry man is required for this period of time. The cost of a day's supply of material used for a load of gauze is about fifty or sixty cents.

Our records show several slight variations from the typical routine. For example, one hospital soaks the gauze over night in cold water, feeling that it makes the preliminary rinsing easier. Again, some hospitals use considerable bleach in washing the gauze. This certainly results in whiter gauze but is of no other advantage. There are also slight variations in the length of time allowed for the various steps but these are of no great importance. The typical method given above secures all the essential characteristics and can be used as the basis for working out your own method.

In preparing this bulletin we have no thought of arbitrarily setting up in detail everything to be said about gauze renovation. It is a question that must be carefully studied in all its phases by the hospital executive and the decision must be made after all things have been considered. We have merely indicated some of the ways this question may be approached and have indicated some of the basic essentials. The committee feels that if the question of gauze renovation is given a fair investigation, it will prove its worth.

Food Equipment for the Hospital[1]

An Important Report

THE subject of the construction and proper operation of the dietary department of a hospital is such a vast one that a report of this sort cannot attempt to cover it.

The location of the kitchen is a matter which has often been debated. The three locations most used are: (1) the ground floor or basement; (2) the top floor of the hospital; (3) a separate building. Each one of these locations has its advantages, and the committee holds no particular brief for any one type.

The architectural divisions into which the dietary department is separated can be roughly defined as a generality, but the kitchen must by all means be designed to meet the requirements of the institution which it is to serve. The divisions which the committee would arbitrarily set for a hospital of 150 to 200 beds are as follows:

1. Main kitchen—36′ x 40′.
2. Diet kitchen—23′ x 27′, with dietitian's office adjoining, 10′ x 12′.
3. Dishwashing room—20′ x 25′.
4. Ice storage and ice cream room—12′ x 12′.
5. Large cold storage space in connection with general storeroom but utilized mainly for foods for the dietary department, which can be requisitioned as needed—25′ x 20′.
6. Three cold storage rooms opening into anteroom in direct connection with the kitchen—each 8′ x 10′—with convenient shelves and hooks:
   - One for fruits and vegetables.
   - One for dairy products and eggs.
   - One for meats.
7. One small cold storage space about 2′ x 4′ for sea foods.
8. One bread and pastry room, about 10′ x 15′.
9. Convenient elevators for transportation of food.
10. One diet kitchen—12′ x 18′ for each unit (20 to 35 patients).
11. One pupil nurses' dining room with serving room.
12. Three dining rooms for the various divisions of the staff (with serving room).
13. One dining room for patients' friends.
14. One dining room for male employés, with common serving room.
15. One dining room for female employes, with common serving room.
16. One milk room.

The committee has made no attempt to suggest grouping of these rooms, or arrangement in the rooms of the various devices which this report will bring to your attention. Those details must be determined separately for each hospital.

Machinery to Save Labor.

Labor-saving devices permit the hospital to economize, both as to payroll and as to amount of foodstuffs used. It is the opinion of the committee that the following should be found in every hospital kitchen:

An electrically driven machine or machines which will chop meat and vegetables, and which may be used as a bread crumber.

A butter cutting device which makes it possible to use bulk butter rather than the more expensive print butter.

An electrically driven meat slicer.

An electrically driven bread slicer, with efficient safety devices.

An electrically driven vegetable parer.

Fireless cookers used overnight in the preparation of cooked cereals are economical and efficient.

Heat Media for Cooking.

It is advisable that as much cooking equipment as possible be heated by steam. Both copper and aluminum steam-heated equipment have been found satisfactory. A recent innovation is a low temperature vapor cooker which is heated by means of steam but which does not employ live steam as a cooking agent. This new method would appear to merit consideration and further trial.

Coal gas is perhaps the most desirable fuel for use in preparing food which must be baked or roasted, or cooked on top of the stove.

A few years ago we seemed to hear more of the use of electricity for cooking than we now do. The use of electricity has been complained of as being slower and more expensive than gas. Improvements in manufacture will no doubt increase the speed of cooking, and the cost of electric power in the institution under consideration will no doubt determine whether the use of electricity is practical. An appliance which has come into quite general use within the past few years is the electrical bake oven for breads and pastries.

In localities where natural gas is plentiful it has been found admirable for kitchen use.

The gas, or other type of stove, should be of ample size. It should be properly located from the point of view of unnecessary steps and should have as few projecting surfaces as possible, so as to simplify the matter of cleanliness. The stoves, as well as all the heated equipment, should be grouped under one or more hoods

[1]Presented to the American Hospital Association by a committee consisting of C. W. Munger, M. D., chairman; F. R. Nuzum, M. D.; E. T. Olsen, M. D.; Miss Rena Eckman; C. S. Woods, M. D., and Miss Alice E. Thatcher.

which are connected with powerful ventilating fans for the purpose of carrying away heat and odors. Electric, gas, or steam coffee machines should be installed in a battery. There should be at least two urns in case of difficulty with one, and in most hospitals it is desirable to have three or more urns for coffee and one or more for tea and cocoa. In the majority of cases steam will be found most suitable for heating these urns.

Care in Handling of Milk.

The handling of milk, cream and ice cream in a hospital is a matter which requires earnest attention. The hospital executive who permits the use of old-fashioned milk can and dipper for milk to be used for drinking purposes is probably making a grave error. Moreover, he is at fault if he does not periodically check the purity of the milk supply by means of bacteria counts made in the hospital laboratory. It is impossible for the committee to recommend any one method of caring for milk. Some hospitals may wish to purchase certified milk entirely for drinking. Others may prefer the pure raw milk and pasteurize it themselves; still others may purchase milk already pasteurized for general use. The committee, then, can only recommend that the dietitian and the superintendent of the hospital know and assure themselves of the purity of the milk when received by the hospital, and that they take every precaution to see that it is not further contaminated or neglected after it is received.

Three Necessary Devices.

The electric mixing machine is indispensable in the modern institutional kitchen. It can perform so many services for the cook that she, perhaps, considers it her greatest boon.

There can be no doubt that the modern type of dishwasher is a vast improvement over hand washing. For hospital use, in the opinion of the committee, the automatic dishwasher which does not sterilize the dishes fails to perform a function which is most important.

Food conveyors are of many types. By some the steam table is preferred with containers sent up on the elevator and placed in the steam table on the ward. Still others use the food cart, heated by hot water or by electricity, or the newer type of food cart constructed on the principle of the fireless cooker or the vacuum thermos bottle. The conveyor heated with hot water has been criticised because of inefficiency and because of its greater weight which requires more current for the elevators. The electrically heated device has been said to overheat the food at times and to give it a warmed-over taste. The third type of food cart has been in use for a shorter period. Either for that reason or because it is superior, we have heard fewer criticisms of this type. It is surely true that it consumes no fuel, that it does not have the disadvantage of great weight, and it cannot overheat the food because the latter is kept at exactly the temperature at which it is put in.

Details of the Diet Kitchen.

The dietitian's kitchen, if conveniently located, need not duplicate all the equipment found in the main kitchen, although a certain amount of duplication is inevitable. The diet kitchen, as well as the main kitchen, should be conveniently located to the service elevators or dumb waiters which communicate with the various nursing units. If the food cart system is to be used these elevators should be so planned as to accommodate one or more of them.

Convenient to both kitchens we should place the cold storage rooms. These rooms should be well refrigerated, should be of ample size, but not so large as to be wasteful of the refrigerant, should contain convenient shelves, hooks or tables, and should be so constructed inside as to make absolute cleanliness easy.

The diet kitchen proper should contain such general cooking equipment as is necessary but should be particularly designed for the scientific preparation of special diet orders.

In order that the hospital diet kitchen may be most efficient, it is first of all important that there be a thorough understanding of dietetics on the part of the physician. A hospital is not prepared to render an efficient food service unless its dietetic department can, and does, teach dietetics to physician, and patient, as well as pupil nurses. The physical equipment of the kitchen must permit of the satisfactory preparation of both general and special diets economically and there must be a transportation system that gets the food, warm and palatable, to the patient. There must be a plan of cooperation between the physician, dietitian, nurse, and patient so that orders given are accurately carried out and recorded.

In the preparation of special diets and especially of diets for diabetics, nephritic, hypertension, gout and obesity patients, it is well to have a section of the general kitchen set aside for this work.

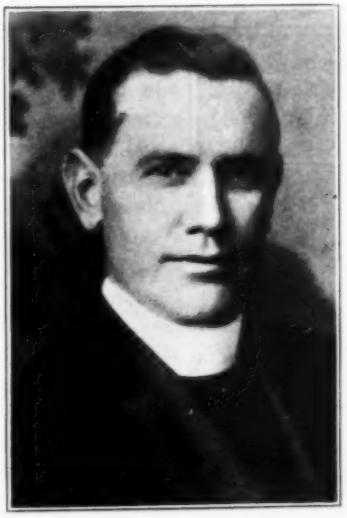
The Personnel Problem.

The personnel of the dietary department is the most important consideration. The committee has not attempted to recommend any particular organism other than to insist that the chief dietitian control the entire food problem of the institution, and that she be not restricted merely to the preparation of special diets. Assistant dietitians should be provided if needed. The presence of pupil nurses and pupil dietitians in the department has a very desirable effect upon the standard of work, and stimulates the superior officers to set the best possible example. Efficiency of employes is all important. Salaries should be as generous as possible, and the department should be so managed that there is not the constant change in personnel so often seen.

The committee recommends a detailed accurate accounting system for the dietary as well as other departments. The dietitian must be able to analyze cost figures if she is intelligently to eliminate carelessness and waste.

DIOCESAN DIRECTORS OF CATHOLIC HOSPITALS—II

REV. PATRICK J. MAHAN, S. J.,
Archdiocese of Chicago, Ill.



VERY REV. FRANCIS M. ORR, V. G.,
Diocese of Leavenworth, Kans.

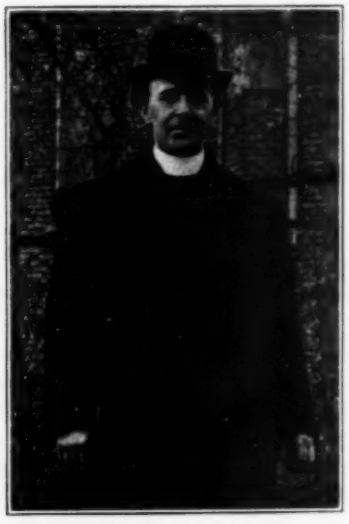
REV. T. McCARTHY,
Diocese of Duluth, Minn.

REV. EDWARD J. MAHOWALD,
Diocese of St. Cloud, Minn.

REV. JOHN P. BOLAND,
Diocese of Buffalo, N. Y.

REV. F. J. PLUTZ,
Diocese of Alexandria, La.

REV. MARTIN J. STEFFY,
Diocese of Harrisburg, Pa.



REV. A. E. LAFONTAINE,
Diocese of Fort Wayne, Ind.

REV. GEO. L. FITZPATRICK,
Diocese of Harrison, N. J.

Hospital Progress

EXECUTIVE COMMITTEE:

C. B. Moulinier, Milwaukee, Wis., Chairman.
B. F. McGrath, M. D., Milwaukee, Wis., Secretary.
Edward Evans, M. D., La Crosse, Wis.
Frederick A. Stratton, M. D., Milwaukee, Wis.
Edward L. Tuohy, M. D., Duluth, Minn.
William C. Bruce, Milwaukee, Wis.

ADVISORY AND CONTRIBUTING EDITORS:

Sister M. Camilla, St. Joseph's Hospital, Chicago, Ill.
Sister M. Cherubin, Mt. St. Mary's Hospital, Niagara Falls, N. Y.
Sister M. Concordia, St. Mary's Infirmary, St. Louis, Mo.
Sister M. De Pazzi, Mercy Hospital, Chicago, Ill.
Sister M. Genevieve, St. Elizabeth's Hospital, Youngstown, Ohio.
Sister M. Innocent, Mercy Hospital, Pittsburgh, Pa.
Sister M. Joseph, St. Mary's Hospital, Rochester, Minn.
Sister M. Madeline, St. Mary's Hospital, Minneapolis, Minn.
Sister M. Magdalene, St. John's Hospital, Springfield, Ill.
Sister M. Marie, Huber Memorial Hospital, Pana, Ill.
Irvin Abell, M. D., Louisville, Ky.
J. Alexander Saint-Pierre, M. D., Montreal, P. Q., Can.
John T. Bottomley, M. D., Boston, Mass.
Rev. Michael P. Bourke, Ann Arbor, Mich.
Joseph Byrne, M. D., New York, N. Y.
Edward T. Dillon, M. D., Los Angeles, Calif.
Michael F. Fallon, M. D., Worcester, Mass.
Rev. Peter P. Finney, C. M., Dallas, Tex.
Rev. Edward F. Garesche, St. Louis, Mo.
Rev. Maurice F. Griffin, Youngstown, Ohio.
William C. MacCarty, M. D., Rochester, Minn.
Hugh McKenna, M. D., Chicago, Ill.
Rev. P. J. Mahan, Chicago, Ill.
Charles L. Mix, M. D., Chicago, Ill.
Edward L. Moorhead, M. D., Chicago, Ill.
Austin O'Malley, M. D., Philadelphia, Pa.
Eugene Saint-Jacques, M. D., Montreal, P. G., Can.
Rt. Rev. Joseph Schrembs, Toledo, Ohio.
Horatio B. Sweetser, M. D., Minneapolis, Minn.
James J. Walsh, M. D., New York, N. Y.
Frank S. Wiley, M. D., Fond du Lac, Wis.

NURSES' MORALE.

Keeping up the morale.

The phrase lingers in the memory from the stirring days of the war. We heard so much then about keeping up the morale of the troops. Just what morale meant many faithful readers of the newspapers were at first a bit puzzled to conjecture. But they soon concluded from the context that morale meant spirit, courage, "pep" in the popular phrase. And so, of course, it does.

Our Catholic nurses are not soldier boys, but they have a fight of their own to wage which is not less wearing and trying at times than the fight in the trenches. Their battle is against human misery and disease, against the ills of body and mind which flesh is heir to. They have enemies to combat, too, within and without, and it needs pluck and spirit and courage of no slight caliber to carry them through triumphantly and give them victory.

Bearing this in mind, the prudent superintendent of nurses will always keep a careful eye on the morale of her charges. She will go to some trouble to preserve them from influences that tend to lower it and she will provide at some cost means of strengthening the morale of the nurses.

We know of no better means for this than a well-organized, properly directed Sodality of the Blessed Virgin. Besides its spiritual efficacy it helps mightily to promote the mutual kindness and devotion to duty which key up the morale like magic.

The number of well-organized nurses' sodalities is constantly on the increase and those hospitals which have them not are uneasy at the lack. It is high time to organize them everywhere. We need trained leaders among our Catholic nurses. The sodality can train and supply them. We need a high morale in the whole nursing body. The sodality can insure it. All success, therefore, to our nurses' sodalities. May they flourish and multiply and fill the land!—*Rev. E. Garesché, S. J.*

THE MINNESOTA-NORTH DAKOTA STATE CONFERENCE.

Representatives of fourteen Minnesota hospitals and nine North Dakota hospitals, met at St. Mary's Hospital, Rochester, for December 5th and 6th. The meeting was a splendid success. The Sisters at St. Mary's Hospital gave a most cordial welcome, and their provision for the meeting in their present commodious hospital was ideal; the Mayo Clinic, always the most gracious of hosts to its crowds of visitors, was at its best.

The program developed by Sister Madeline of St. Mary's Hospital, Minneapolis, was spirited and stimulating; varied enough to enlist the interest of all; specific enough to bring out the intimate points of view of those Sisters grappling with very pressing immediate problems in their own hospitals.

It is quite apparent that these sectional meetings have a great field in just this sort of intensive co-operation for the solution of local problems. When they have been fully developed, there will then remain more time in the meetings of the general association for the numerous larger issues that need analysis and discussion from what we may call the national point of view.

In due time the proceedings of this sectional conference will appear in these pages. Our readers are urged particularly to look for Father Moulinier's suggestions relative to a "Normal school" for Catholic Sisters—a plan dealing specifically with the problems of more intensive training for Sisters in the field of nursing and hospital administration. Sister Olivia, of St. Mary's Hospital, Duluth, gave a graphic outline of the main features of the plan of our dynamic president. The only objection offered seemed to be the question of expense. As in many other lines of improvement for hospitals, it is apparent that the entire burden cannot be loaded upon the Sisterhoods themselves.

It is to be hoped that the stenographer's notes will give the essentials of Bishop Heffron's discussion on, "The Nurses' Practice Act." It is unlikely that any legislative plan fostered by the Registered Nurses' Association anywhere is ever going to come in violent contact with the interests of the well established nursing schools now in control of our Sisters' hospitals. Nevertheless, it is only timely and fair that these matters be given discussion and be fully understood, and thereby disagreements averted.

Father Mahan and Dr. Moorehead came on all the way from Chicago. The former added much spirit and vigor as an exacting presiding officer; the latter assisted greatly in leading the discussions from time to time back into the channels which his wide experience in visiting hospitals has impressed him as being most essential.

As is usual, the number of doctors in attendance was relatively small, but the quality unqualifiedly high! The problems and questions presented by the Sisters and delegates showed clearly enough that many of their tribulations concerned vitally not only the mental attributes but even the physical peculiarities of their medical staffs. Therefore, fellow staff members, read about yourselves in the columns of this journal. One Sister asked: "How are you going to deal with a doctor-surgeon who always criticises in the operating room when he is in the wrong"?—*E. L. T.*

VOCATIONS AGAIN.

There will still be some little delay before our literature on "Increase of Vocations" reaches the different hospitals, convents, schools and motherhouses. In the meantime I hope the different Sisterhoods will increase their activities and develop their individual Community plans for carrying on this most blessed work. More prayer, more discussion, more work which will bring to the minds of the young and of the old a more appealing conviction of the beauty and nobility of a life of consecrated teaching, nursing and every kind of technical service for the sick. More teachers, more nursing Sisters, are constantly being asked for by bishops, priests, doctors, and lay people and yet only a few are helping in any systematic way to make the young appreciate that they must, in their tender years even, hear resounding in their young minds and hearts the appeal to service that comes to them from a people that is starving for lack of the bread of truth, from a race that is sick and dying without all the mothering care that should come with lavish abundance from the heroic women of our days. It will be a sad reproach on the spirit of our times if we are ever forced to admit that there are not enough young men and young women of today who will be willing to carry the burden of our times. There must be enough young men and young women of unselfish mind and character to take up the tasks of our threatened civilization. They must be made to see and then they will appreciate what the age expects of them. The Divine source of inspiration and strength is infinite. We humans must take a greater share in the holy work of our day.

C. B. M.

AN APPEAL FROM ROME.

"St. Joseph's Training School for Nursing Sisters founded by Pius X in 1906, encouraged by Pope Benedict XV, approved and blessed by Pope Pius XI," such is the subtitle of a circular sent from Rome. This circular has words of inspiration and encouragement to all the Sisterhoods in the United States and Canada which are concerned with the care of the sick in any capacity. The need of special training for the care of the sick is most clearly recognized by the three last Pontifs and the most effective way to bring it about was considered by these Pontifs to be the establishment of a great central training school for this purpose. It is, therefore, with renewed appreciation and energetic action that we in the United States and Canada must take up the same question and bring it to a successful issue by the united efforts of the many hospital members of our Catholic Hospital Association. I quote again from the same circular,—"from the very early days of his Pontificate Pius X realized the necessity of the Church coming to the assistance of the various nursing Sisterhoods in the task of training their religious and fitting them for hospital work as understood now throughout the world." The problem is a much more pressing one in Europe than it is in North America and yet we all realize and, I trust, every Sister hood more and more keenly from day to day, the absolute necessity of more careful and systematic training for all the high technical work to be done by Sisters in the care of the sick. I find there is very little doubt left in the minds of any of the hospital Sisters in regard to the importance of having as soon as is practicable a central training school for those who are to carry on the hospitals in the United States and Canada. I, therefore, again urge upon Superiors of hospital Sisterhoods both provincial and local to think out as clearly and definitely as possible all the ways in which they will be able and willing to aid such a movement. Within the next few months the details of such an institution, I trust, will be worked out and sent to all Superiors and the hospitals in our membership.

The training school for nursing Sisters has been in operation in Rome since 1906 and has had pupil nurses in attendance at the school from 34 different Sisterhoods. May we not confidently expect that before very long our Hospital Normal School will be attended by representatives from just as many, if not from more Sisterhoods, in the United States and Canada. There can be no doubt, I believe, in anybody's mind who appreciates the enlightened zeal of the Superiors of the Sisterhoods of the United States and Canada, that we will soon have further evidence of the determination of our Sisterhoods to make of their hospitals, institutions where the very best service will be given the sick through the most enlightened technical assistance to the medical profession in their highly scientific treatment of the patients.

It is comforting and encouraging to know that Pius the X, Benedict XV and the present gloriously reigning Pius XI have both set us the example and given their heartiest approval and aid to an undertaking such as we are now planning. May no untoward happening hinder the speedy accomplishment of our project!

C. B. M.

LOOKING FORWARD.

Shall HOSPITAL PROGRESS continue to grow? Shall it fulfill its mission of constantly aiding the activities of medicine under the guidance of principles that are

true and over a field that will be ever-broadening? At this period these are questions that present themselves; they are questions that must be squarely faced, and whose answer is up to you, up to every member of the Catholic Hospital Association of the United States and Canada. The life of HOSPITAL PROGRESS is wholly dependent upon the life of the Association and, obviously, the life of the Association is wholly dependent upon a strong and actively cooperating membership—a large membership of nurses, doctors, Sisters, chaplains and hospitals, with each one contributing to success and all firmly determined that our magazine shall be second to none; that it shall be a beacon-light in this great cause *pro Deo et humanitate.*

In truth it may be said that, up to the present, the success of HOSPITAL PROGRESS has been beyond expectation. Because of the large membership of the Association, the field of subscription to the magazine has been wide; because of the character, quality, and practical value of its editorial material HOSPITAL PROGRESS has extended its influence beyond the boundaries of our Association, even beyond the limits of this continent, now monthly bearing its noble message to various parts of the world. And because of all this, to repeat, the field of subscriptions and the editorial worth, the advertising pages of our magazine have steadily increased in number and quality; and, as a total result, its financial status is sound.

So, looking backward and at the present, we find reason for contentment, and for deep gratitude to those of genuine spirit who have helped lighten the burden by responding to our appeals for cooperation. But, what of the future? Shall we stand still or, faithful to our trust, shall we go forward? We dare not think of a single step backward, for who would be so lacking in duty, so reckless as regards the indelible records of history, as to bear the responsibility of that? But, progress requires continuous labor, unified and constant endeavor among all whose interests are concerned. This means you—it includes every one of us. Have you done your part? Have you, by sending in papers, pictures, news, contributed to the editorial pages of HOSPITAL PROGRESS and thus extended a helping hand? Have you tried to get members and subscribers? Have you shown to those firms with which you deal the value of advertising in your magazine, and manifested to them how much you would appreciate their cooperation?

With absolute faith in the final triumph of truth, we are looking forward in serene confidence. We have good reasons to feel that during this year our magazine will, in a still higher degree, prove true to its name. —*B. F. McG.*

TAKING ONE'S OWN MEDICINE.

For some days before the Christmas holidays the writer was confined to the hospital. It gave pause for reminiscences, as well as for dreams and imaginings, of what the future holds for the Sisters' hospitals.

Glancing back a third of a century since he began to work in this particular hospital, and some score of years since he first was a patient therein, many changes are to be noted. The hospital has grown from an ill-devised one of some thirty beds to a splendid institution of 200 beds with modern conveniences, labor-saving devices, fine laboratories and diagnostic facilities, and a splendid operating department where beauty is combined with convenience. This in spite of the subsequent establishment of three other hospitals, in a city whose population has increased but little during these years. The maternity department in the year just closed cared for over 300 cases, while its nutrition nursery put many an ill-nourished child on the road to health again. There is an organized staff, a good library, a splendid training school and a fine nurses' home with gymnasium, recreation room and outdoor recreation field.

It seems past belief when, looking back the third of a century, one recalls how, during a laparotomy, the pipes of the stove heating the operating room fell down across the patient's open abdomen and no harm resulted; or those several successive nights following an abdominal operation when the operator arose once, or perhaps twice, to wend his way to the hospital to aspirate the glass drainage tube. These were days—and nights—of real sport.

But all is not changed. The same keen supervision of the patient's comfort, the same kindly personal care, the same informal dropping-in of the sweet faced Sister, and the same genuine, pleasant, personal interest in one's welfare by the Mother Superior are still there. And in spite of the gentle, though efficient, nurse in training who bustles about the room and whom one would not wish to be without in hospital work, the feeling instinctively comes that it is the good Sisters themselves who make one feel so at home—who are really indispensable. This thought is accentuated when there drops into the room that silent, noble little soul, the oldest Sister there; almost the sole link between the present and the old hospital which opened its doors in 1883.

One day the Chaplain (only temporarily filling the position) dropped in for a chat. He had just been reading an extract from a paper the writer had given before the National Catholic Charities Association in Milwaukee, and the talk was on social service in Catholic hospitals. It was encouraging to get his viewpoint catch some of his contagious enthusiasm and learn how much real corporal, as well as spiritual work, there is to be done in even a moderate sized hospital. The writer has long felt that the beginning of true social service in our hospitals lies with the right type of chaplain; young, energetic, healthy, sympathetic, a he-man with a trained social viewpoint. May one not again appeal to the readers of HOSPITAL PROGRESS to speed its consummation?

Always have our Catholic hospitals done good work, charitable, Christ-like, unselfish; but not always scien-

tific and too often uncharted work, untouched by the great movement in recent hospital development. Then came the great *inspiration* and its realization in the Catholic Hospital Association, so that today the great majority of our Catholic hospitals are united for mutual benefit and advancement, with the result that they are rapidly forging to the front in solid hospital progress, in well-organized, efficient medical staffs, and in human, kindly and withal scientific care of the sick.

And again our President's intuitive understanding visioned the necessity of a means of communication for exchange of views and the diffusion of the latest up-to-date knowledge in the construction of hospitals, their equipment and management; and HOSPITAL PROGRESS came into being. And it seems to the writer that under the intelligent, trained and untiring efforts of our executive secretary it more nearly fulfills its mission than does any other magazine with a special purpose in the hospital and health field.

From our sickbed may we not make this New Year's appeal to the readers of HOSPITAL PROGRESS: Let no misunderstanding, no personal ambition, no sectional jealousy, no incompatibility of temperament, no cross purposes of any kind endanger or disrupt the great work which has been done and which promises so much for the future of our Catholic Hospitals. We are only on the threshold of our problems. Sane judgment, wise leadership, undivided, unselfish service, devoid of all personalities, are needed if we are to be true to, and worthy of our opportunities.

To the leaders of our Catholic hospitals, the good Sisters conducting them, may we note appeal to the words of that noble, upstanding Catholic layman, Admiral Benson: "We cannot be contented or satisfied simply with our sacramental lives. We must go out and exert in every way an influence for good. We are compelled, by the conditions that exist, to exert ourselves more in the civic and every-day life than ever before."—*E. E.*

COMMUNICATIONS.

It is the common custom of newspapers and magazines to require that all articles, news items, etc., sent in for publication, be signed by the author in order to establish the responsibility and authenticity of the material. The signature is not published except by special permission of the person and is required only for the information of the editors. In a secular publication the necessity and reasons for such a rule are clear and have been developed after long experience.

In editing a publication like HOSPITAL PROGRESS, it frequently occurs that letters, news items and other material which come in are merely signed "Sisters of ———." There is no other clue to the individual to whom the magazine is indebted for this editorial assistance. The practice is undoubtedly dictated by the highest motives of humility and modesty and is praiseworthy from a religious standpoint.

The practice, however, causes some difficulty in handling correspondence and articles. It places the responsibility for what may be a purely personal statement of fact or an expression of opinion, upon the hospital where the writer is stationed or upon her entire Sisterhood.

It is, therefore, suggested that all communications sent to the magazine be signed with the name of the sender.

Idle Thoughts — Mostly about Residents

Robert A. Kilduffe, M. D., Pittsburgh, Pa.

Every doctor is a philanthropist of necessity—it's thrust upon him. But he should practice it as a side-line only and he is entitled to know when he is being philanthropic—to know it at the time and not have the knowledge forced upon him later.

* *

It is true that man does not live by bread alone—but a certain amount of bread is essential to any given amount of living.

* *

The man who said "Charity begins at home" may have been a doctor who attempted to support his family on the gratitude of his patients.

* *

It's always possible that a few new wrinkles may have come out since the staff man graduated; on the other hand, it's possible, too, that the accumulated experience of those years may have taught him a few things not emphasized in the lectures.

* *

A man may be a very good teacher without being a professor. It isn't only what you know but the knack of being able to tell it to the other fellow which is important.

* *

One of the quickest ways to acquire wisdom is to keep the oral orifice closed most of the time and the ears wide open always.

* *

It is a very good thing to have a fine train of thought—but it is excellent to be possessed of equally good terminal facilities.

Fingers were made before forks and the sense of touch was in use quite a while before the development of the X-ray. A good many residents never diagnose a fracture until after the plate is developed, which brings to mind that very few young doctors are able to start practice with a million dollar hospital plant in their office.

* *

When a sheaf of laboratory requisitions, all aimed at the same patient, arrives in the laboratory it is often possible to determine by their perusal the possible diagnoses their originator has in mind—or whether he has any or is just hoping.

* *

The value of any laboratory examination is influenced to a marked degree by the proper or improper collection of the specimen and is finally determined by the application of the findings to the particular patient. It isn't the test as much as its interpretation that counts.

* *

Considering the ways of the butcher, the baker, and the candle-stick maker one is struck with a certain ultra-frankness in acquainting their customers with the price and a tenacity of purpose in reminding them of their indebtedness. To the casual observer this may explain the occurrance of the "merchant prince" and furnishes a certain amount of food for thought.

* *

A striking difference between the "tradesman" and the "professional man" is that the former has fewer bad accounts and lets them run for much less time.

SECTIONAL CONFERENCES of Catholic Hospital Association of The United States and Canada

The Third Annual Wisconsin Conference[1]

ARE OUR HOSPITALS ADVANCING THE IDEAL?

Sister Mary Rita, R. N., St. Joseph's Hospital, Milwaukee, Wisconsin.

We have all read and heard many exalted and inspiring articles and discourses on the ideal hospital and its highest efficient service. We, however, know that at the present time this is not only advocated in classic literature and eloquent speech, but we actually experience true excellent institutional service, advancing slowly but steadily toward the ideal. When we speak of the highest attainable and realize that our endeavors have not as yet been crowned with that perfection, we are apt to feel somewhat discouraged and, as a natural consequence, to give up the attempt to thorough advancement. Let us beware of this pitfall and, though it is a problem consuming unlimited time, demanding constant effort and an unsatiable aim of ever progressing, let us ever be up and doing.

In view of the fact that we today are particularly interested in Sisters' Hospitals, let us remain in our own sphere and briefly survey whether our hospitals are actually advancing toward the ideal. We all know the essentials of a recognized standard hospital—a well organized staff, facilities wherewith to render complete laboratory service and an efficient case record department. If today we behold our institutions favorably listed among the recognized hospitals, we are aware of having advanced. Thus inspired with new enthusiasm and zeal, we should at this time form and collect fixed ideals, in view of further advancement. We should broaden our conception of the duties and obligations to our sick, to the nursing profession, and in diverse ways unswervingly and successfully direct our aim to the highest attainable service for the benefit and comfort of the patient. To assist us herein, we have the most valuable means at our disposal. Our Parent Association; our annual conferences; the select or special conference, if we like; good literature—all proving exceedingly valuable to our cause.

Owing to the unflinching courage, constant effort and ever alertness of our hospital-managing Sisters, we have gone a good way. Many problems are still confronting us. The significant problem of admitting the patient is a field that can be much improved. The ease and tactfulness exercised right here, is of great importance. It oftentimes is the solving key of a patient's attitude toward a hospital during his entire stay and after his dismissal. Protecting the patient against mercenary and incompetent service from different sources, adjusting reasonable complaints, are grave problems yet to be solved and worked out, which will ultimately improve and bring about better service.

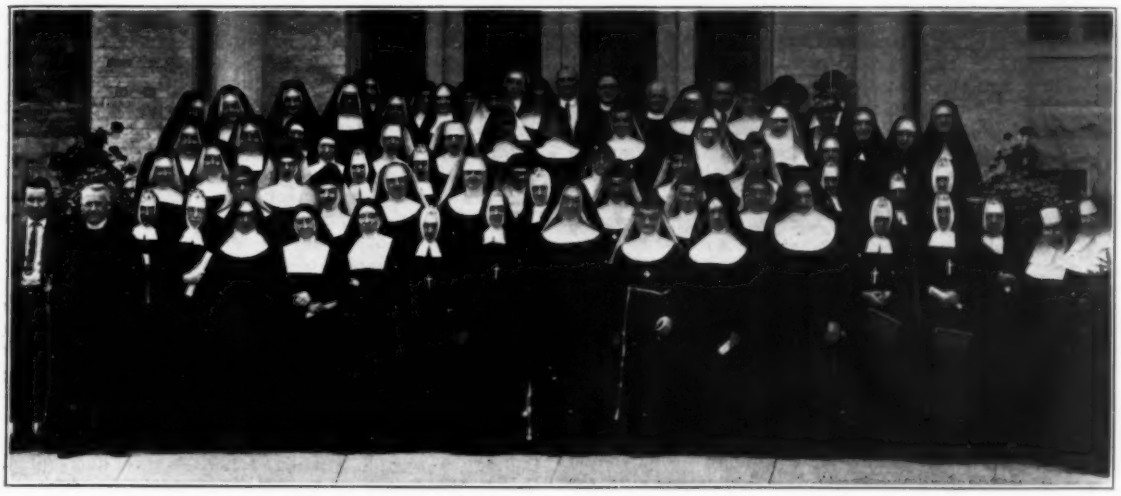
All our units can be analyzed and worked out almost indefinitely. If we study our laboratory service, we are pleased to note in all hospitals the routine examinations; in many, the more elaborate examinations. The elimination of unnecessary work affected by the aid of this unit we all appreciate. However, is the service systematically performed to always guarantee the patient the benefit thereof? Are the analyses considered with a view to benefit the patient? If not, what procedure can be successfully invented? Such and similar questions, if rightly considered and solved, will help considerably to increase the volume and conduce to more efficient service—consequently advancing toward the ideal.

A most prominent bearing on ideal service is our established record department. In consequence of the intimate connection this department has with the medical, nursing and hospital profession, we can readily comprehend the possibility of good service, and the wonderful results obtained directly by the patient, not only for the present but also for the future. Does our record department come up to a fair test? Does our record committee at the monthly review conscientiously perform its duty, question and study efficiency? How about our follow-up system? Do our hospitals appreciate the importance of social service? This service is not yet established in many of our hospitals, or, if introduced, is not on a firm basis. We might at least be allied to some central social service bureau, and thus, by cooperation, supplement medical and hospital treatment, and be instrumental in warding off serious illness or effecting permanent cure. This service is nothing new. It is reinstating and revising what in the early Christian days was done by those noble and grand souls we read of in Church History.

Another almost indispensable unit of our hospitals, essential to consummate ideal service to our sick, is a well organized and regulated training school. A recognized training school should be provided with all facilities for educational progress, adhering to standard curricula and state requirements. In view of the present day high standard and advanced training of the nurse, our schools unquestionably, too, must conform in proportion. A staff of competent teachers, adequate clinical material and the opportunity of handling all classes of patients—these are the requisites for an ideal training school. This does not necessarily require a large hospital. Our small hospitals can have an equally active and efficient training school, since it is not the size of the institution, but rather the equipment and the systematic work which determines efficiency. With special study, our small hospitals can organize and maintain schools of high standards, which will give the community the type of nurse worthy of her profession. Granting that the small school is well equipped, it offers even greater facilities and advantages to the pupil than the large school, just as a small class is preferable to a too large class. However, let us bear in mind, like all units, our training schools, too, have many problems to solve and work out, before they can be considered ideal.

In consequence of the activity and efforts of all units to advance in this race, it is only logical that our surgical and nursing units enter the race, as the unavoidable result of team work procedure.

[1]Held at St. Francis, Wis., August 24-25, 1922.



WISCONSIN CONFERENCE, CATHOLIC HOSPITAL ASSOCIATION, MILWAUKEE, AUGUST 24-25, 1922.

A very able surgeon of this city, recently, while visiting his patients in our hospital, was summoned to a long distance telephone call. Having taken the message the doctor said, "I am requested to take the first train available to a small town about thirty miles from here. A patient in a hospital there requires an operation, and I have been asked to perform it." In a friendly way he concluded, "Sister, we doctors no longer hesitate to operate at any Sisters' Hospital. These hospitals have undergone great changes. All have well equipped operating departments which offer ample facilities to the surgeon. A written diagnosis is requested by all before the operation, and specimens are preserved for analysis. The technique, too, is good. Indeed, I see a bright future for the hospitals." I asked the doctor how he explained the change, to which he immediately answered, "The Catholic Hospital Association and hospital standardization have been the two greatest factors in improving hospital service." This incident prompted the thought, "Are our hospitals actually improving?" We realize and are conscious of advancement, yet we equally realize that we have not as yet attained the goal at which we aim. We are convinced of the necessity of acquiring the highest standard to enable us to give the most efficient service. We wonder at and find incomprehensible the past tardiness to grasp and develop true service. We now acknowledge that true ideal hospital service is an educational process, producing scientific institutional service for the purpose of benefitting and comforting the sick. Let us ever bear in mind our duty and the sole purpose and problem of the hospital in its entire scope, namely—to give the patient the very best in the very best way. All our service not corresponding with this grand Christian idea is hostile and destructive. Conscientiousness and good principles aid powerfully in developing the ideal.

In concluding may I not say that every individual Sister, irrespective of capacity or department, painstakingly devoting time and effort to render the very best to her ability, is contributing her mite to make the hospital, in which she is working, a stronghold for good—an ideal hospital? She is at the same time promoting her own cause, her own true ideal, and meriting the eternal reward, promised by our Divine Savior, "What thou hast done to the least of my brethren, thou hast done unto Me."

Uniformity of Case Records

Sister M. Bernard, R. N., St. Agnes Hospital,
Fond du Lac, Wisconsin.

The hospital exists for the patient and therefore seeks to give the best service to the sick and injured. Its primary aim and purpose, accordingly, should be to render to each and every patient admitted, and for whom it assumes responsibility, the most efficient care known to the medical and nursing profession.

As a semi-public institution the hospital seeks the good-will as well as the financial and moral support of the community, and in return the community is entitled to its most efficient service. That this service is rendered the institution can adequately prove through comprehensive case records only, for it is the case record which gives evidence of the caliber of the medical and nursing service of the hospital.

Recognizing thus their responsibility to their patients and to the public, I venture to say that at the present date there are very few, if any, of our Sisters' hospitals which have not as yet established a modern and complete record system, and thus laid the foundation of one of the most important scientific departments in modern hospital activity. No one can reasonably doubt that the promoters of this particular phase of hospital service have devoted much time, energy, and study to the endeavor to introduce into their systems the most useful, scientific, and complete methods and forms available. But as we are living in an age of efficiency and progressiveness, it may perhaps justly be feared that some of us are somewhat too energetic and enthusiastic in the pursuit of perfection and completeness in our record systems, and as a result superfluous record forms may have obtained vogue, forms that might profitably be discarded. Far be it from us to sacrifice any of the essentials requisite to completeness and accuracy, but our aim is to rule out such forms as are duplications or repetitions and of no definite or useful purpose or advantage.

The Rev. C. B. Moulinier in a recent article in "Hospital Progress" on "Uniformity of Case Records" wisely recommends efficient simplicity. Indeed, simplicity should be the keynote. As a worker in the record department and from experience acquired in visiting and studying the various systems of many of our Catholic hospitals, I am convinced that many of our systems are too complex, re-

quiring a great amount of time ere one can become familiar with the various methods of procedure. Now in order to insure the aim and purpose of this paper, it might be advantageous to briefly analyze and compare the various record forms as used in some of our systems. I have listed them as essentials and non-essentials. Under essentials I would classify or name the following:

1. The Admission Card containing the sociological data necessary and beneficial to the hospital during the whole period of the patient's stay. This, so to say, forms the nucleus of the entire system.

2. The General History Sheet, which should be so designed that it may supply all the information desired, such as personal, general and negative history, past, family, etc. I do not deem it necessary to enter into detail as all my auditors are already acquainted or familiar with what constitutes the integral part of this sheet. The Ear, Nose, and Throat Record should be a special form of history sheet giving briefly a statement of complaint indicative of operative procedure or treatment. This should be a very compact record combining the history with the physical examination, the operative procedure or treatment and progress, together with the pre- and post- operative and final diagnosis. The Pregnancy, Labor, and Newborn Record must necessarily be an especially designed form which, for convenience and as a guide to the physician, may contain headings and notations called for in this type of case.

3. Physical Examination Sheet. This may be a separate record, or it may form a part of the General History Sheet.

4. The Operative Record Form with its specific headings serving as an aid toward accuracy and completeness.

5. The Progress Record. This, if well kept, is as essential and very valuable record, rendering case summaries interesting and at the same time providing material for medical research. A Progress Record should be kept on all major surgical, medical and obstetrical cases. Notations should be made daily by the physician or surgeon in charge or they may be dictated to the nurse in charge of the individual patient, O. K'd., and followed by the doctor's signature. At our hospital a separate progress record as described is not kept on minor surgical cases, but in place of this we have introduced a Compact Record Sheet which combines the Treatment and Progress record with the nurse's notes. Careless and inaccurate records are naturally of little or no value.

6. The Physician's Order and Treatment Record is very essential in the study of medical cases and in furthering research work. It also serves as a safeguard against errors in giving medicine since the physician is obliged to write all prescriptions ordered. In case of error this record is invaluable for reference. At our hospital we have a place reserved on this record for the ordering of the diet in medical cases thus securing a reminder to the physician in ordering the same and preventing much confusion.

7. Laboratory Sheets should be so designed as to furnish ample data covering chemical, pathological, serological and bacteriological work.

Non-Essentials.

1. The Summary Card. My experience regarding this record convinces me that it is a superfluous and non-essential card and I am quite certain that a majority of record clerks will agree with me in this view. I might add here that at the Conference on Records at the recent Convention of the Catholic Hospital Association which I attended, many of the Sisters and Record Clerks present held the same opinion. Indeed it was decided upon that those hospitals that had not as yet organized a complete system of records should not introduce the said card. How often is the summary card called for? During the years in which I have had connections with our record department there has not been a single instance in which a physician or surgeon making inquiries regarding a dismissed patient was satisfied with the information imparted to him on the summary card, but in every instance asked for the complete case history accompanied by laboratory, X-ray, operative sheet, etc. Now, the writing up of the summary card occupies about one third of the record clerk's time which verily could be utilized in a more useful and beneficial manner. It is customary in some hospitals to give the nurses in training a short course in record keeping, though of course they do not always apply what they have been taught. Would it not be a better plan and should we not get better results and more accurate records if the record clerk would use some of the time devoted to writing summary cards, in examining the charts of the nurses of the various services and correcting negligencies and errors at the time they occur, instead of waiting until the patient has been discharged and then probably being obliged to require the nurse to re-write the entire record, wasting paper, energy and valuable time? Incidentally she could also note the physicians and surgeons who are tardy in writing up their histories, progress notes, etc. By calling timely attention to omissions or negligence in these matters she could insure better, more accurate and complete records. Is not the Summary Card obviously a duplication of the Operative Record in surgical cases and of the Treatment Record in medical cases? Why waste our time upon duplications?

Permit me to suggest, that in place of the summary card, a uniform card very comprehensive, yet concise, be designed for use in the various hospitals. This should be filled out annually or semi annually according to the number of cases treated. It should give evidence of all cases treated e. g., gall bladder, gastric and duodenal ulcer, appendices, etc. This record would be valuable not only to the hospital itself but it would also provide a nucleus for the research division, the establishment of which is under contemplation by The Catholic Hospital Association.

2. The Final Diagnosis Sheet. Some systems of records have a separate sheet or form for the final diagnosis and complications. This, I think, is a superfluous sheet, the final diagnosis being very appropriately written as a final notation on the progress record, putting, so to say, to the latter the finishing touch.

Uniformity of Record Forms.

There are a great many types and forms of hospital records and one can scarcely say that any particular form is more serviceable than another or offers superior advantages. Usually the form adopted by a hospital has been carefully designed to meet the needs of that institution and has secured the approval of the physicians practicing in that hospital. Since nearly all of our Catholic hospitals have already organized their systems and it is to be presumed that in the introduction of forms all have endeavored to conform as closely as possible to the forms recommended by the American College of Surgeons, it would seem that there can be very little dissimilarity in forms except perhaps in size and arrangement of design. Regarding design and size of record forms, permit me to state that the accuracy of a record does not depend upon the design and size, but upon the correct statement of facts and the manner in which these facts are recorded. A doctor may be able to write a better history on a blank history sheet than on one with elaborately designed headings and notations. Furthermore a change in form always causes confusion and additional work for all concerned, and will eventually mean for those hospitals that have already installed a number of filing cabinets, a change of file. Therefore I should hesitate to recommend or advocate absolute uniformity of record forms, but a more uniform method of recording facts and conditions is a desideratum.

Uniformity of Nomenclature, Indexing and Filing.

Uniformity of nomenclature is indeed to be recommended, and I hope to see it accomplished. How often are we not requested to tabulate statistics for a Staff doctor or another who is unable to obtain sufficient data for the purpose of studying a certain disease or in preparing a paper to be read at a medical meeting! The nomenclature and terminology of the same being familiar, with how much more ease and rapidity could the desired information be obtained! The same is true of the method of indexing. It would moreover be of inestimable advantage to a Community of Sisters who make hospital work their only or chief occupation, for if a record clerk be transferred to another hospital she need not spend any time in studying the method of indexing and nomenclature since she is already familiar with the same and therefore will at once feel at home. As regards the filing of records, this integral part of the work more than any other should spell simplicity. It should be so simple that any of the Sister Supervisors or senior nurses to whom the method of filing has been once explained should be able to procure from the Record room any information desired without seeking the record clerk or in her absence waiting for the information until her return. Of what value is a system if one cannot obtain information at the time when it is needed? Too many numbers on a case record tend toward confusion rather than accuracy. At our hospital the patient is given but one number upon his first admission and by this he is known in every department and during his entire stay in the hospital, and in case of readmission this number is retained. Thus far we have had no confusion in this regard.

In conclusion I wish to state that my purpose in recommending more concise and simple methods in record keeping is not the result of aversion for labor nor because I am overburdened with work, but because I feel that the record clerk's time and energy might be expended in a more efficient and useful manner in some other phases of hospital activity, rather than in monotonous duplications, the only purpose of which is to fatigue brain and hands and add bulk to the record file. Ruling out superfluous records will decrease the number of forms and this will likewise lessen the work of our physicians and surgeons by requiring fewer signatures on their part which will certainly meet with their approval. Only too frequently is the record clerk greeted with the encouraging (?) remark: "Sister, you have too many record forms; too much red tape; too many duplications each calling for an additional signature, etc.," and can one blame the medical men? It is only too true. Perhaps many a time a doctor in his efforts to complete his records and keep them up-to-date, in thus being delayed by repeated requests for signatures is making a poor suffering patient wait for his much-needed service.

However, the task we have undertaken is not an easy one and we shall have many obstacles to encounter and various problems to solve, which in turn will require much time, thought, and deep persistent study. The first step toward the accomplishment of our goal has already been taken in the appointment of a Committee on Uniformity of Case Records from among the supervisors of records. No definite plan, however, has been assigned to each individual member of said committee. Being a member of this committee, permit me to suggest that each hospital or institution give at least to one of its members, who possesses the necessary qualifications for the work, an opportunity to attend a summer course in record keeping, where the proper technique and the principles involved can be acquired by the student to the inestimable benefit of the record department of the institution she represents.

In our endeavors to attain efficiency and progress, let us not however, be too ambitious or enthusiastic, perhaps even jeopardizing our religious duties; let us be on our guard against the slightest indifference or neglect in the care of the sick; let us render them the best service in our power to give and to which they are justly entitled. May we follow the footsteps of our divine exemplar, Jesus Christ, to whom we have consecrated life and all its ambitions, and who was accustomed to leave His work, teaching, and preaching in order to minister to His suffering and wounded fellowmen. He has promised that whatever we do to the least of our brethren in His name, shall be done unto Him, and that no kind deed or act, be it ever so trifling, shall go unrewarded. Every patient committed to our care, be he rich or poor, is entitled not only to necessary and essential service, but also to those little favors, kindnesses, and courtesies which add so much to comfort and promote speedy recovery, and which in turn win good will, appreciation and enduring gratitude.

In conclusion, I shall repeat the statement made in the introduction to this paper, namely that the hospital exists for the patient. Without the patient there would be no need for such an institution. Therefore our primary and chief aim and purpose in all the phases of hospital work, should be to render the service tendered our patients the very *best* service that it is possible to achieve.

Surgical Technique

Sr. M. Wenceslaus, St. Mary's Hospital, Madison, Wis.

By Surgical Technique is meant a method of performing a surgical operation under strict aseptic conditions. While an intimate acquaintance with detail is essential for successful practice of aseptic surgery, a thorough knowledge of the principles upon which that practice is founded, is also necessary. Without such knowledge, the carrying out of those details in a prefunctory and unintelligent manner, whether on the part of the surgeon, the nurses or assistants, is attended with danger; for the aseptic chain is composed of many links, the breaking of any one may at any moment result in disaster.

The technique of modern, aseptic surgery, as practiced at the present day, has gradually evolved from contributions made by the surgeons, bacteriologists, pathologists and chemists. From the mass of facts that has been accumulated from the beginning of medicine, has evolved the present day method of aseptic surgery. At the present time the tendency is toward multiplication of methods. Except in small matters of details, technique may almost be said to have become standardized. In general it is a technique which is based upon cleanliness and heat sterilization, rather than upon chemical disinfection, This is founded on the theory of the germicidal power of uninjured cells rather than that of chemical antiseptics.

Complicated aseptic methods are superfluous since simple methods have proven more effective. Modern surgical technique has become so crystalized that modifications represent, in the main, simply differences of detail but not of principle. The crude antiseptic method of a past generation aimed less at the exclusion of organisms from the wound, than at their destruction in and upon it. It is the recognition of the fact that cell protoplasm is far more easily killed by strong chemical antiseptics than are micro-organisms which led to the practice of what is called aseptic, as opposed to antiseptic surgery. And yet asepsis is not opposed to antisepsis but results from and is dependent upon it. Any ritual of cleanliness of clothing, furniture or manipulation designed to exclude organisms

from a wound may be rightly termed an antiseptic method; so that modern technique is a judicious use of antisepsis and asepsis in the performance of a surgical operation. But inferior methods efficiently carried out may give better results than the best methods carelessly or ignorantly applied.

Since the successful technique depends on organization the intelligent and the most painstaking co-operation of the entire operating-room force is essential, if the best results are to be obtained. But the surgeon cannot personally superintend the carrying out of all details and so must naturally be, to some extent, at the mercy of his subordinates and assistants. Consequently in the long run, the best organizer and disciplinarian will be the most successful. A permanent organization with few changes in assistants and nurses would be the ideal. For with a permanent personnel, detailed and characteristic technique can be thoroughly understood by all in attendance and new and improved details can be added without disturbing the technique. Such an ideal arrangement is not generally possible. The selection of house surgeon, surgical nurse and assistants is not usually within the province of the surgeon; and so changes are often made just as the team is working efficiently.

Since such a handicap is inseparable from our hospitals, special precautions have to be taken to minimize its ill effects. The obvious result of this perpetual changing is an increase of the work and worry of the surgeon and the surgical nurse. The only encouragement we can enjoy is the knowledge that properly trained and efficient men and women are being sent into the world to grow and develop and perform a noble work.

The entrance of the patient into the hospital for preparation marks the beginning of the ritual, each step of which should be carried out with strict adherence to detail. A set of rules for preparation should be made and followed out by those fully instructed as to their importance. Too often is the preparation of the patient carelessly carried out by those who are not trained especially for such work and too frequently is such an important step given over to those who are not responsible.

These necessary precautions against the suppuration of a wound mean much to the doctor, the hospital and most to the patient, for through lack of careful technique and negligent preparation thousands of dollars are added to the cost of surgical attention to a patient. This is, of course, a meager loss compared to a lamentable result to the victim's health.

The approach to the operating room may also be considered a part of the technique. After the preliminary hypodermic, all noise, visiting by relatives and farewells should be excluded. Calmness and serenity should prevail and the patient should be conducted to the operating room and anesthetized without the slightest disturbance. For centuries ago Shapespeare taught at this trembling point of nervous tension,

> "Our foster-nurse of nature is repose
> The which he lacks; that to provoke in him
> Are many simples operative, whose power
> Will close the eye of anguish."

The technique during the operation is the most important part and by all means should be carried out without a false step. Much depends upon the surgeon; much depends upon the surgical nurse. Although preparation to meet unforseen conditions comes with experience, still a complete outlay of all necessary instruments, sutures, etc., that might be used is essential. An over-abundance is a credit; a shortage, which may require a loss of time, or prolonged anesthesia or more serious consequences, is a fault which belongs to all. To the surgeon principally for not giving complete instructions to the nurse. In general, it shows imperfect organization, imperfect co-ordination and imperfect cooperation.

Surgical technique does not end with the removal of the patient from the operating room. It includes all methods used in the treatment of the patient and wound, hypodermics, hypodermoclysis and removal of sutures. It ends only with the discharge from the hospital. Upon surgical technique depends success—success in curing disease, success in saving life and success in giving to the world a life that may continue.

Training School Problems

Sister M. Bartholomew, R. N., St. Joseph's Hospital, Marshfield, Wisconsin.

The ancient history of hospitals and their methods of dealing with the sick, both before and during the early days of Christianity would in itself afford abundant material for an interesting volume, while a second might deal with the rise and growth of the multitudes of monasteries and religious sisterhoods, which began in the middle ages and have lasted down to our own times.

These events are full of intense interest from a historical standpoint, though they have little to do in leading up to the present methods in our hospitals and their training schools for nurses.

St. Vincent De Paul founded in 1633 the order of the Sisters of Charity and through them greatly improved the work of nursing. It may be remembered that a founder among the many, had spoken with prophetic voice of things to come for the Sisters of Mercy: "They shall have no monasteries but the house of the sick, no cloisters but the streets of the town and the wards of the hospitals, no other enclosure but obedience, and for Convent only the fear of God; for a veil they shall have a holy and perfect modesty; and while they keep themselves from the infection of vice, they shall sow the seeds of virtue wherever they turn their steps."

Many years have passed since those words were spoken but they perfectly picture the ideals of the trained nurse today.

As the hospital is the first place where the nurse is introduced in her professional work, so the hospital will be the first place where she will have the opportunity of putting into practice the "rules of nursing ethics" as well as all others which lead toward success in her training to become a real nurse.

Those who wish to become nurses, join the nursing staff in some hospital for training, just as the medical student joins his medical school. The "hospital" is the training school of the nurse.

One of the first duties of a nurse at the start of her training, is to gain as thorough a knowledge as she can of her work. The more thorough that knowledge is, the more efficient her services will be, though perfection in knowledge we cannot attain.

Progress is slow, disappointments may arise, but, the reward is certain: a consciousness of good work well done; one of the best rewards attainable in this life.

Not only during the period of her training, but all through her career there must be progress in knowledge, for if one is not progressing one is going backward, since there is no standing still. On this point great stress must be placed while the student is in training.

The hospital is not only the school where the nurse gains the technical knowledge of her training, but what is more essential, the place where she lays the foundation of those ethical and moral principles which are to guide her through life and help her preserve unstained the good name of her profession. Without the latter a training school for nurses will be an absolute failure.

Every teaching hospital fulfills two great functions. It is a training school for the nurse, and it is a home of refuge for one in time of sickness.

It is the latter function that is really the primary one, as the name "hospital" implies. One must never for a moment lose sight of this great function of the hospital and all that it means and should be for the patient.

Our patients are our guests, and we must treat them with as much courtesy and kindness as we would extend to those who accept the hospitality of our own homes.

Picture what sickness means to many of the poor. The "father" of the family prevented by illness from working for his wife and children, who depend on him for their daily bread. The "mother" separated from her children. The "child" taken from his home, ill among strangers. Each and all of these filled with a dread of the unknown, frightened by the strange surroundings, and, added to all this is the physical suffering from the disease. Here the kind word and deed of the nurse will never be forgotten.

The object in establishing a nurses' training school is to educate young women having the necessary qualifications in the noble, self-sacrificing and delicate duties of caring for God's favorites, the sick. There is no higher mission in life, for a young woman.

They must be taught to care for the suffering in an intelligent manner, which at the present time is quite a problem in many of our training schools, as there is a great responsibility in selecting and preparing students for this most honorable profession. It is absolutely essential that they have the proper moral, mental and physical qualifications.

They must also have religious ideals, love for their work and love for humanity. A nurse without religion is crippled and often dangerous. In hospital work and life there is sometimes a tendency to forget that we are not entirely physical beings, but possess a spirit as well. I do think and strongly believe that in our nursing career we have the greatest opportunities in regard to spiritual as well as physical work, for often we must assist and see to it that our patients receive the last rites of the Church to prepare them to face God through death.

Great pains must be taken to imbue them with a thorough appreciation of their grand calling, its heavy responsibilities, and to teach them to conduct themselves at all times toward patients and the public in a most conscientious and upright manner. They exercise it by their character, for nurses cannot avoid exerting a moral influence. It is what a nurse is in herself that creates a moral and religious influence over her patients.

To give our students the best training, our institutions must be equipped with the most modern and up-to-date apparatus as needed in the medical, surgical, obstetrical, pediatrical and, if possible, contagious departments.

It is also an advantage to have well equipped laboratories for X-ray, Radiological, Electrocardiographic and basal metabolism work; also, a fully equipped department for hydrotherapy, electrotherapy and massage.

The work of the professional nurse is practically the same in all states of the Union and therefore it is perfectly evident that the training which is to guarantee a certain acceptable measure of competency, must follow somewhat similar lines, whether it be given in Wisconsin or elsewhere.

The value of nurses' training is being recognized in so many different fields, and the character of their service is changing so rapidly, that the training which was considered adequate a few years ago is no longer sufficient. You may hear at times the following question from the student: "How much will I get out of this training?" The answer must be: "You will get out of it just as much as you put into it. That is, if you put your heart and soul into it with a real philanthropic spirit you certainly will get the best in our training schools of today.

In recent years it has been recognized that to make skillful and competent nurses a high degree of preliminary education is indispensable, in order to lay a sound foundation on which to build.

Training schools should make it a point to secure the cooperation of high school faculties, as well as all other highly educated people, for through their influence more intelligent young women can be induced to enter training, thus raising the general standing of this noble profession.

The training school, in order to accomplish satisfactory results, must provide for its teaching work comfortable, well ventilated, and well lighted classrooms and laboratories. The number and size depend upon the size of the hospital and the number of students to be trained.

An accredited school in our state should have:

First: A general classroom with comfortable desks and chairs, ample blackboard space, anatomical charts, obstetrical charts, stereopticon with hundreds of lantern slides of anatomical, histological and pathological specimens so that the lectures are illustrated, thus making it easier for the students. It should also have a manikin, a skeleton, and first-aid charts.

Second: A dietetic kitchen with proper working tables, cupboards, hot plates, a bake oven, dietetic and meat charts in a spacious room, as well as a complete dietetic laboratory. Here the student should be taught the testing of cow's and mother's milk as the latter especially may be of great importance and solve difficult problems in the management and feeding of infants and sick children.

Third: Scientific laboratories for the training and teaching of chemistry, urinalysis, pathology and bacteriology. Each student should have one month's practical work in these laboratories so that they may be taught urinalysis, blood counting, and all essential laboratory procedures necessary for a nurse.

Fourth: A pharmacy in charge of a registered pharmacist, to teach the student nurse how to prepare medicines under proper supervision.

Fifth: The hospital should maintain a reference library to be open at all times to the nurses. Here I wish to state that every month the State Board of Health from its registered nurses' department sends out to its training schools material on various subjects, which the superintendent should go over carefully with her classes, so that the State Board Nurses' Department does not labor in vain, and that the students may derive the benefit thereof.

Sixth: A demonstration room equipped with a Chase hospital doll and a bed for same, besides all other facilities for the practical teaching of the student nurses. Here the tray system is prepared and used for demonstrations of every kind as used daily in hospital, such as:

Catheterization and Cystic lavage.
Douches: External and vaginal.
Enemata: For all purposes, including Murphy drip.
Gastric: Lavage, gavage, and nasal feeding.
Hypodermoclysis: With sterile graduated irrigator and attachment ready for use.
Thermometer basket: (Smith's).
Blood pressure outfit.
Various surgical dressing trays.
And all other articles needed as for:
Baths and packs of any kind.
Poultices as mustard, flax-seed, digitalis leaves, etc.
A cupping set.

A good hospital must be provided with all the above-mentioned articles.

In all training schools the most important essential is the superintendent or director. She must be a woman who puts her whole heart and soul into the school and teaches with a real philanthropical spirit. She must have an inexhaustible supply of enthusiasm and must have the power to win confidence and instill in her students the real spirit of an ideal nurse.

She must cooperate harmoniously with the supervisors of the various floors and departments, for without this no hospital can achieve or produce the much sought for "well trained nurse."

A nurse must be a true woman and act as a consoling angel. She must be the brilliant sunbeam in a dark corner, the sick room. She must have good judgment and executive ability, as without it she will be a failure.

Nursing is one of the most noble professions open to women. As soon as the well educated and physically fit women of today realize how wonderful it is to be able to soothe and relieve human suffering, whether it be in a humble hut or a millionaire's palace, then our training schools will be over-filled and there will be no shortage in the nursing profession.

Florence Nightingale's famous call for recruits was sounded in 1868. One hundred years after her birth the whole world is now calling and urging the young womanhood of America to help their fellow men. The well trained school nurse is the revolutionizer of the community. It is she who is doing the pioneer work in raising the physical and moral standards of the whole nation.

Miss Nightingale was but human, though it seems likely that she was nearly infallible in matters pertaining to the training of nurses. Her rare union of head and heart qualities, her ability to keep sight of minutest details without losing her grasp of the fundamentals, and her wide knowledge and long experience fitted her to speak with almost supreme authority.

We shall try to remember some of her warnings. She characterizes the essentials of a nurse's training as two:

First: "That nurses must be technically trained in hospital training schools."

Second: "That they are to live in homes to form moral lives and discipline."

A very careful consideration of these two simply stated principles will help some of our training schools of today to place a finger upon the source of their troubles.

In managing a hospital and conducting a nurses' training school proper, it is best to have sisters and nurses who are trained in our own school placed in charge of the various departments in the institution, as doing so will solve many problems.

The reason for this is that all the students and supervisors will then perform all professional duties according to one technique, which makes practical teaching and demonstration less difficult.

The superintendent must meet with all the supervisors of various departments at least twice a month, to discuss difficult problems as they may arise. In doing so an institution will not only gain scientifically, but also give more efficient service to the sick.

If a sister in charge of the home is sensible and tactful, she can keep those in her charge not only healthy but happy.

Optimism is a virtue that any individual may cultivate to his advantage, but a nurse must have it. Patients do not wish to see in the sickroom a countenance that is depressing. For one who does not naturally look at the bright side of things, the habit must be cultivated, and it can be, if a person is wise enough to realize what an asset it is.

An optimist is one who always makes the best of everything and always looks at the cheerful side. The greatest satisfaction in life is to do good work. Small things make perfection, though perfection is not a small thing.

Lastly, in the training of nurses let us always remember the "Golden Rule." "Do unto others as thou wouldst have them do unto you."

TRAINING SCHOOL PROBLEMS.

Sr. M. Laudeline, St. Joseph's Hospital, Ashland, Wis.

In discussing training-school problems I would emphasize "ethics," or the personal conduct of our student nurses.

It is no doubt a Divine law that woman shall set for her age and country the standard of morality. We should prove that our graduates can be modern without sacrificing modesty, and be witty without being over-aggressive.

They should guard against the degrading modern dress. Present-day style in dress is one of the signs of the times. Modern women show by the way they dress that they are ready to accept, to a perilous degree, pagan moral standards, which is a disquieting indication of the tendencies of the present day.

Thoughtful people are unanimous in attributing the alarming decline in public morals, which followed the war, largely to the indecent style of the dresses our women now wear. For the sake of brevity it would be well for all those interested in the subject to read carefully an article in the HOSPITAL PROGRESS, of May, 1922 (Page 208), by a Sister of Providence.

Another important duty in the training of our student nurses is the sound ethical principles of the inviolability of professional secrets. Too much stress cannot be laid on this principle, which demands that information intrusted to them should not be divulged. It is simply intolerable if there is not a well-grounded confidence that such secrets are locked up securely in the minds of our nurses.

Violation of this confidence is a crime against individual rights and against public good, inviting not only reprobation, but punishment. Intrusted secrets belong to a highly privileged class and must be protected.

Discussion of "Training School Problems"

Sister M. Bernice, R. N., St. Joseph's Hospital, Milwaukee.

Sister Bartholomew's paper on "Training School Problems" includes the history of nursing, shows the spirit that prevailed in the past, the progress made in recent years; it brings out the training of nurses, and the extreme importance and value of a thorough ethical training. She gives an outline of the necessary facilities, and the curriculum in theoretical and practical work.

Sister's paper has stimulated a response in the form of a combination questionnaire and self-examination, dealing in particular with cooperation. As cooperation, like many other good things, must begin at home, let us start with ourselves.

Let Us Begin With the Ethical Training of the Nurse.

Do we cooperate with our student nurses, and teach them to cooperate with the hospital, training school, and patients?

Do we understand what cooperation means—what the foundation of it is—that it is a union of forces, all working together for the same end, and having the same principles?

Do we understand that it means the total elimination of all erroneous self-seeking?

Are we practicing this spirit of cooperation in our daily dealings with our student nurses?

When we correct a student, do we impress upon her mind the *principle* of the correction, and not give her the idea that it proceeds from our personal feelings at the moment?

Or do we give the impression "Do this because I *want* you to do it?"

Do we inspire the thought in her that we are all working together with the same principles, for the same

end, and that we, as well as she, must conform our actions to accomplish this end?

Do we point out, when advising or correcting, why we act as we do, rather than simply force our method upon her by sheer will power and superiority of position?

When Miss Blank makes a mistake, do we wait until our irritability has subsided, think over the matter a little, and then point out to her why and how she must never repeat the error?

Or do we, in the heat of excitement and personal feeling, sharply and perhaps unjustly reprimand, showing her that we have very imperfect self-control, and giving a bad example?

Do we forget to give our students a word of encouragement and appreciation when they do well, not forgetting, however, to give the word of reproach and correction when they do poorly?

Do we carefully listen to both sides of a story before administering corrections, or do we judge hastily and condemn quickly?

Do we correct nurses in the presence of patients, doctors, or others?

If so, can we expect the nurse to be loyal to us, when we are so disloyal to her?

Are we giving our students the idea that we have their true interests at heart, or do we give the impression that we act from mere feelings that sway at the moment, that we are unreliable and changeable, with no fixed ideal or sense of honor? In other words, that self is uppermost with us, and not true, right principles?

Are we very careful to study individual students and approach them from the proper angle, rather than treat all alike, irrespective of their peculiar individual traits?

Are we constantly suppressing the student, for fear that she will become too forward?

Or do we correct and develop her tendencies, rather than destroy them?

When Miss Blank timidly makes a suggestion, do we smother her with a flat contradiction, or do we take up the thought, think it over, and then gently correct or accept?

Do we make use of our power and authority to force others, rather than convince and gently guide them?

Do we misuse authority to interfere with student nurses' strictly private affairs, forgetting a delicate regard and consideration?

Do we treat our students always with respect, remembering that they are ladies, and children of God?

Do we ever give students the impression that we are jealous and selfish, that we do things because we *wish* to do them, and not because they are right and proper?

Can we demand respect and consideration from others, unless we give it in generous measure?

Can we force respect from our students, or must we merit it?

Do our students hesitate to come to us and open their hearts, because we make no effort to understand them, or consider their point of view?

Do we cooperate with one another, or do our students see a lack of understanding and unity among us?

Can we expect them to cooperate, if we do not?

Are we as willing to yield personal ideas for the sake of principle, as we expect our students to be?

Can we ever hope to teach nurses ethics and psychology, if we are not teaching and practicing both, in our daily lives?

Does anyone deny that actions speak louder than words, that example is more powerful than precept?

A student nurse, upon being asked what she found hardest in training, answered: "To do the best I can, and then be misunderstood." This remark furnishes ample food for thought.

Let Us Briefly Consider Cooperation From the Nurse.

We hear so much about student government; isn't that a misnomer?

Should it not be student cooperation?

Isn't it really student cooperation for which we are looking, and not student government?

Would students be able to govern themselves wisely?

Why not utilize, in cooperation, the forces which the nurse, at the present time, is likely to utilize against us?

If students are given a little freedom in expressing ideas to us, are they so likely to criticize when out of our hearing?

If we are tolerant and understanding, will they have any reason to feel resentful?

Do you not think the nurse's attitude to us will be patterned very much after our attitude to her?

A Few Queries Regarding Cooperation of the Nurse with the Patient.

What causes most of the complaints lodged against our student and also graduate nurses?

Does the cause lie in faults of character, or in lack of proper theoretical and practical training?

Why does a nurse not answer the calls promptly?

Is it because she is habitually very busy, or neglectful?

Why does she fail to comply with patients' little requests? Because she does not know how to do so, or because she is forgetful?

Why is the patient or his room neglected? Because the nurse does not know how to do her work, or because she is a poor manager?

Why aren't the doctor's orders always carried out? Because they cannot be carried out, or because the nurse is not sufficiently interested in her work?

Why do patients not like nurses? Because of their work, or because of their characters?

Does a nurse with a properly developed character, do poor work?

Do you not think a patient would wink at many little mistakes, if the nurse gave the constant impression that she meant well, and had his interest at heart?

Do you not think that this very interest of the nurse, and good-will of the patient, would stimulate her to make fewer and fewer errors?

Do most of our difficulties between patients and nurses arise from the nurses' lack of theoretical and practical knowledge, or from a lack of practical ethics and psychology?

Can any of us doubt, after considering these questions, the importance of training of character, both in ourselves and our students?

A Little Consideration of the Theoretical Work.

Do we present our subjects as a whole to the nurse, showing very definitely the connection of one to the other, and then proceed to bring out each branch separately, never losing sight of the fact that all subjects radiate from, and center again, in the patient?

That is, do we first give the nurse a bird's eye view of nursing as a whole, and then proceed to take each part separately?

Do we impress upon the nurse that no knowledge given is superfluous or useless, since directly or indirectly, it helps the patient?

Should we not carefully and clearly show the connection between theoretical and practical work?

Should the nurse not clearly realize that a little work in the pathological, chemical, and dietetical laboratories is only broadening her view a bit, and *not* fitting her to do such work?

Are we sure that we do not present our subjects to nurses as a garbled mass, letting them pick their way through as best they can, and connect up the ends of each branch, according to their individual ability?

Are we satisfied with the textbooks of today? Do they cooperate?

Are they systematized in such a manner that teaching is made easy?

If they are not satisfactory, why should we not endeavor to supply our needs ourselves?

Now for the Practical Work.

Do we insist upon the general principles of treatments, etc., when we teach them, impressing upon the nurse's mind why they are given, and why care should be employed?

Or do we simply insist that the nurse forever and exactly do just as *our particular hospital* teaches?

Even though the nurse should conform to the hospital's routine while she is in training, should she not feel free to occasionally offer a suggestion, and be encouraged during the demonstration periods, to suggest a better method if possible?

Would this not stimulate her mind to originality, and also, by the way, keep her from criticizing, and airing her opinions promiscuously, when out of hearing?

Would this not be encouraging cooperation?

A Few Questions on Training School Records.

Are our records simple, concise, condensed and practical?

How large a record should be kept on file when a student graduates? Our final record, containing all information, is a 5 x 8 inch card.

What should a final record show?

Should it not include the information conveyed on the application blank, the nurse's theoretical and practical studies and her examination per cents, her general character and conduct?

Should a nurse be given a copy of her final record (excluding remarks about character) when she finishes her course?

Is it not well to return her credits, health certificate, letters of recommendation, etc., when she finishes?

What advantage would there be in retaining these?

Would not uniform records in training schools be an advantage, just as they are in hospitals?

These few questions barely touch upon "training school problems," which are unlimited, but the allotted space being short, it is necessary to be comparatively brief.

Staff Doctors Section
Cooperation of Service

The Technique of Urological Study in the Hospital

Leslie Whitlow, M. D., and Alexander Hamilton Peacock, M. D., Providence Hospital, Seattle, Wash.

Patients who require an extensive urological examination should be hospitalized. The advantages over home or office examinations are many for a better degree of surgical technique can be carried out; X-ray and other equipment are at immediate disposal; anesthesia may be administered if necessary; various urinary, blood and other laboratory tests may be readily made. Ureteral colic following cystoscopic examinations may be much more easily controlled. Office examinations where cystoscopy is necessary are often unsatisfactory and the patient in the end is much better cared for in a hospital.

As this paper has primarily to do with the technique of these examinations, it may be well first to mention the arrangement of the surgery. The surgery should not be crowded for space, there being enough room to admit the patient on a stretcher and from there to the cystoscopic table without coming in contact with sterile materials. The room need not be darkened as the cystocopist can easily accommodate himself to a lighted room, and it is much better for all assistants. The table should be so constructed that the head and shoulders may be elevated; the table should be broken distally to lower the patient's buttocks to reach this part; it should have padded legrests that fit the knee bended at right angles and which may be lowered or raised and moved to or from the table.

PROVIDENCE HOSPITAL, SEATTLE, WASH.

To the operator's left should be placed:

(1) An irrigating outfit which consists of a large conical (1000) c.c. graduated glass container to which, at exit of fluid, is attached rubber tubing about six inches long, and which carries a thumbscrew for the control of the cold sterile water used as irrigation fluid. Into this is inserted a glass tube about four inches long and to this glass tube the sterile tubing (4-6 ft.) may be attached. This outfit is preferably carried on a portable affair which will allow raising or lowering of the container.

(2) A rheostat and cord. This is also portable.

(3) A small table containing materials used in operation for D. & C.

(4) A large table containing the following sterile materials: (a) Two 1800 c.c. trays. One contains fluid for sterilizing the cystoscopes, generally formalin 4-10 per cent, the other sterile water to remove the sterilizant as these substances are very irritating to the genito-urinary apparatus. (b) One small basin containing accessory attachment to the cystoscope as tubing, blind rubber nipples, open rubber nipples that will fit ureteral catheters from No. 4 to 11. (c) Lubricant, any sterile as glycerine or K-Y jelly. (d) One bulb uretheral syringe, 10-20 c.c.0. (e) Two one-ounce medicine glasses, one containing local anesthesia, one sterile water. (f) One 500 c.c. basin. (g) Graduated glass beaker, 1000 c.c. (h) Cotton and towels.

(i) Ureteral catheters.

Sterilization of Ureteral Catheters: Prepare one quart of either ten per cent formalin or 1-1000 bichloride of mercury solution. Siphon through the catheters either one of these solutions for thirty minutes. Remove from solution carefully, roll catheters about two coils, put a small rubber band around same and then immerse again in above solutions. In this manner the catheters are first sterilized on the inside and then on the outside. Remove the catheters with a sterile instrument and place on table with other cystoscopic materials or put in sterile towel and keep until needed. Care must be taken not to bend the catheters too much for it will fracture same and also makes it hard to handle them through the periscope.

To the operator's right are arranged unsterile materials. In this manner the cystoscopist may demonstrate any picture and not break sterilization.

In cystoscopic work it is important to remember that all solutions used must be *cold.*

If a female patient have the nurse scrub the genitalia and thighs first with green soap and water and then with bichloride solution. One of two methods may be used: (a) Catheterize the patient with sterile glass catheter (save specimen), then instill about one ounce of local anesthesia into the bladder and then remove catheter. The anesthesia used varies, every cystoscopist having his own drug and strength of same, but four per cent procaine is generally used for the female bladder and the male urethra and ten per cent cocaine for female urethra. (b) Do not catheterize but merely anesthetize the urethra and collect bladder specimen as it passes from bladder through the cystoscope. Use cotton pledgets for the urethra, put first one in and allow to stay about three minutes, remove and put in another one.

If it is a male patient, the orderly may wash off the genitalia with green soap and water and then bichloride solution. With a bulb syringe enough anesthesia, procaine four per cent, is put into the urethra to distend it, which in turn will allow some solution to pass the cut-off muscle, and anesthetize the posterior or back portion of the canal. If the posterior urethra is very sensitive it is well to use a "depositor" in which case the tablets of anesthesia used may be put where the greatest tenderness is located.

SHOWING X-RAY ROOM IN PROVIDENCE HOSPITAL.
Patient placed on Potter-Bucky in position for first and second pictures, for control, and first injection for Pyelogram.

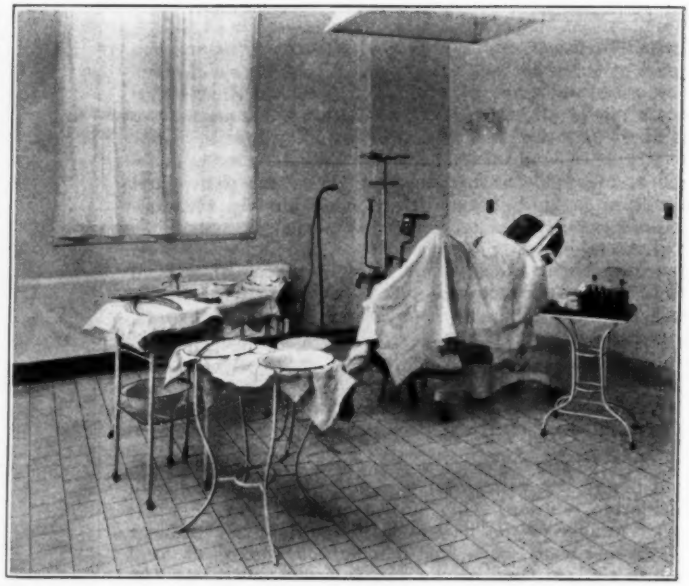
X-RAY ROOM IN PROVIDENCE HOSPITAL.
With patient in position for final X-ray picture with Potter-Bucky diaphragm on edge, so as to show kidneys with patient in upright position. This picture will show any existing ptosis.

After the patient has been surgically prepared and urethra anesthetized, the preparation of the patient is the same as though doing any operation on the perineal region. The physician then passes the cystoscope, the urine that flows through the same is collected in a sterile basin and marked "bladder." The bladder is then filled with sterile water until it feels full, this water is allowed to escape from the cystoscope into the large glass beaker and the amount that the bladder held is definitely determined. This is called "bladder capacity." Following this a careful observation of the bladder is made and the ureters are catheterized. It is not the purpose to describe any pathological or normal structures or how to catheterize the ureters, but to do the latter, one must have many catheters as plain and X-ray, sizes from No. 4 to 11 inclusive, and some hard and some soft and flexible, for what will enter one patient's ureters will not another. With the catheters in each ureter the cystoscope is removed and the ends of the catheters resterilized with an alcohol sponge and the catheter which is in the right ureter is put into a sterile test tube which is marked "right" and the one in the other side marked "left."

After specimens have been taken, a divided functional test of the kidneys is done. Exactly one c.c. of Phenolsuphonaphthalein is injected into the vein, the overlying surface of which has been sterilized. The time of the injection is carefully noted. The catheters are now inserted into corresponding bottles which are marked "right-H" and "left-H." Each bottle has a few drops of sodium hydroxid in it, this being the indicator which determines the "appearance" of the drug. When the dye begins to be excreted in the urine the sodium hydroxid has a reddish color to it. When the coloration appears the time is again noted and the number of minutes from the time of "injection" to time of "appearance" is noted. This should not exceed five minutes in normal cases. If desired the catheters are left in the ureters for fifteen minutes longer and the functional test for that length of time determined. This is called "divided function."

When the catheters are withdrawn the patient is instructed not to void urine for one hour at which time it is collected and is marked "first hour." At end of another hour the urine is again collected and marked "second hour." By use of a colorimeter the exact amount of the dye excreted can be estimated and a most valuable information of the functional activity of the kidneys ascertained.

Many times the above procedure will give the cystoscopist all the information that is needed, but there are many conditions of the ureter and kidney which can be diagnosed only by the use of the X-ray. For this we need a "contrast solution," this solution being anything which will make a shadow on an X-ray plate when any hollow is filled with the same. At present three drugs are most widely used, namely sodium bromide 20 per cent, sodium iodide twenty per cent and thorium nitrate one per cent. Oxygen gas is used by some. Thus cystograms, ureterograms, and pyelograms are taken, i. e., the contrast solution is in bladder, ureter, or pelvis of the kidney. Materials necessary for these examinations are four ounces of contrast solution, granulated burette or a twenty cubic centimeter graduated glass syringe fitted with needles of varying size that will fit various sized ureteral catheters, tooth picks, medicine glass, small funnel and small rubber tubing, soft rubber catheter.



A SURGERY IN PROVIDENCE HOSPITAL, SHOWING THE MOST COMMON METHOD OF ARRANGEMENT OF TABLES AND STANDS FOR CYSTOSCOPY.

The technique for the making of a cystogram: Pass a soft rubber catheter or hollow sound into the bladder and empty the same. Connect the funnel to the catheter and allow enough solution to run into the bladder to not quite fill the same. On an average four ounces will determine any pathology in the bladder. Stereoscopic plates are always better than single ones.

The technique for the making of pyelograms and ureterograms: Use a glass syringe, fill the renal pelvis through the catheters until the patient complains of pain on the corresponding side in the region of the kidney. Fill the pelvis first with sterile water. This is to determine the "capacity" for this side. Do likewise with other side. Allow about five minutes for this sterile water to drain off. Then inject a slightly smaller amount of the contrast solution than what the "capacity was determined to be. Or simply inject the contrast solution into the kidney pelvis slowly until the patient feels pain in the back on corresponding side. Or the burette method may be used which consists of allowing the fluid to run from a long graduated burette into the pelvis of the kidney. It is said that it has an advantage in that it does not produce as much renal colic as the other two methods.

The Technique for the making of Ureterograms: Proceed as if making a pyelogram, then withdraw the ureteral catheters about five inches and put about four cubic centimeters more of the contrast solution through each catheter.

The taking of good X-ray pictures is extremely difficult to do, because of dealing with a soft structure which is deeply seated and surrounded by other soft structures. A picture that shows excellent bony detail is not always a good kidney picture. Any picture which will clearly demonstrate the last rib, the crest of the ilium, the transverse processes of the spine and the psoas muscles should give a good kidney picture, providing there is not too much gas in the bowels. For the latter it is well to give the patient a cathartic the evening before taking the picture and to eat sparingly of supper and no breakfast. That is providing the picture is to be taken in the morning. What is an excellent technique with one machine and gives good pictures may be a failure with another of equal capabilities. Thus the technician has to become thoroughly acquainted with the machine used. Of recent years many advances have been made in this line of work due to the use of materials which give better pictures of these deeper structures. Among these may be mentioned the sensitive double duplitized films for the glass plates; the use of the compression cone, and the Potter-Buckey diaphragm. This latter has been of great value because it allows of a longer exposure as it cuts out the secondary rays which make the plate look foggy if given the same exposure. The compression cone is of great value in X-ray of the kidney, because it pushes the stomach and intestines out of the way, elevates the liver and helps to prevent the patient breathing while the picture is being taken.

Accompanying are three photographs taken at the Providence Hospital, Seattle. These show the surgery and department devoted to urological study and treatment. The service has been greatly benefited by using a rotating nurse. At no time is there a "green" nurse assisting. Each new nurse is taught by the retiring one how to prepare the patient, how to arrange the room, and how to take care of the catheters and cystoscopes, all of which are a great relief to the surgeon.

This is a duplicate of the instructions to the nurse in preparing the patient and operating room for a complete renal study.

These instructions are printed and hang in the room.

Cystoscopic Table:

Cystoscope.
Irrigating outfit.
Rheostat and cord.

For preparation of the patient:

Green soap and water and Bichloride of Mercury solution D/C outfit.

Large Table: (all materials sterile).

1. Two 1800 c.c. trays.
   A. Formalin four per cent.
   B. Sterile water.
2. Sterile basin 500 c.c.
3. Lubricant "K Y" or glycerine.
4. Rubber tips for cystoscope.
5. Ureteral catheters.
6. Luer syringe 10 c.c. and needle to fit ureteral catheter.
7. Bulb syringe 20 c.c.
8. Anesthesia—Novocaine four per cent—Cocaine ten per cent.

Phthalein Tray:

1. Ampulle of Phenosulphonopthalein (Hinson & Westcott).
3. Two c.c. Luer syringe and needle (sterile).
4. Tourniquet.
5. Sod. Hydroxide ten per cent.

X-ray Tray—Materials on sterile tray.

1. Contrast solution 5 ounces
2. 30 c.c. Luer syringe and needle
3. Burette and needle
4. Medicine glass
5. Soft rubber catheter
6. Small funnel

} Sterile

For Urinary Specimen:

1. Large bottle, 6 ounces.
   Name
   Bladder
2. Two small bottles, 2 ounces.
   Name Name
   Right Left
3. Two small bottles, 2 ounces.
   Name Name
   Right "H" Left "H"

LOYALTY TO OUR SCHOOL.

Eleanor Mae Slaven, Class of 1923, St. Mary's Hospital, San Francisco, Calif.

The virtue of loyalty is in itself, apart from the common estimation of mankind, one of the highest we can possess. The consummation of praise is often summed up in the words "faithful to the end."

Loyalty is not only an honored virtue, but a thing desirable in itself. The question then suggests itself, "To whom should we be loyal?" We have indeed duties to be true to all mankind, but we have special duties to some—to our parents, superiors, and friends. We have obligations then, to those who have benefited us, to those who have devoted themselves unselfishly to our welfare, and to those who are our companions, whether in prosperity or adversity. We have obligations also to our school, which is our benefactor and protector. Loyalty in words, loyalty in service, and loyalty in sacrifice; for words are needed as an expression of our feelings toward one who is truly a mother to us, sheltering us within her protecting arms, and instructing us by her kindly teachings; loyalty in service because continued good actions and work are necessary for her welfare; and loyalty in sacrifice because the time must come when loyalty in her service will demand a sacrifice, and this we should give with cheerful hearts.

If we consider it carefully, loyalty to our school is not a small thing. It is she who has taken us, as it were, in the infancy of our knowledge, and has nourished us with her generous teachings; has cared for our intellectual and moral development, and by her careful training will bring us to the point where we are able to launch out for ourselves. Even here her tender care will not cease; she will look after us with a maternal solicitude, will rejoice in our successes, will be happy in our joys and will console us in our failures and sorrows. Loyalty to our school and Sister nurses is, therefore, a duty, it is a necessary obligation; but it is more than this, it is a pleasure and a privilege and we should regard it as such.

Loyalty, then, is the one virtue which will always be honored and respected; it is in a certain sense the queen of all virtues, for it is an expression of the highest form of brotherly love; it is a manifestation on our part of our gratitude towards those who have benefitted us.

Through loyalty we shall not only merit and attain the respect of our fellowmen, but shall combine within ourselves a sterling self-respect and unimpeachable integrity, and best of all, we shall have the commendation and praise of God; for to be loyal to our companions, our Alma Mater, and our country is an excellent way of being loyal to Him.

THE IDEAL NURSE.

"The Ideal Nurse" is the title of a pamphlet recently issued by the Mary Immaculate School of Nursing, Jamaica, N. Y. The pamphlet is interestingly arranged and splendidly printed and contains in a most interesting form, the rules and regulations of the hospital as applied to nurses. The pamphlet opens with a page devoted to a section on the ideal nurse. Four pages following are devoted to practical etiquette. The suggestions under this head are not of the trivial type but are of those larger and more important acts and attitudes which go to make up the really courteous lady and gentleman. Just to quote a few paragraphs:

"Be neat and tidy in your personal appearance. Take a complete bath at least three times a week; better still, every day. Keep your hair, teeth, finger nails, and clothes in good condition. Look well groomed."

"Be courteous, frank and friendly. Don't try to be popular by attracting attention. Popularity which has to be sought, is of short duration."

"A request beginning with 'Will you please?' or 'May I ask you?' 'Kindly hand me,' 'Will you be so kind?' and uttered in a pleasant voice and with a smile, always meets a willing response. And then a hearty 'I thank you,' or 'Thank you very much,' (never simply 'thanks'), makes the one who grants the request feel happy for having caused you the pleasure."

"When walking, do not stoop, but hold the body erect with the chest expanded. As a rule, set the feet at an angle somewhat in the form of the letter 'V' both when standing and walking. A quiet, even, steady, firm walk which can be quickened on occasion is the least wearing on a nurse and most satisfactory for everybody concerned."

"Try not to jostle one another. If by chance you do, say 'Pardon Me'."

"Avoid all running in the corridors; start in time, and walk."

"Avoid boisterous company, be not the one who has 'all the say.' It is most unbecoming, and marks the 'bore' in conversation."

"Avoid boisterous talking and laughing. The tones of the voice proclaim quiet accurately the social background of the girl, the man, the woman."

The second section of the book is given over to a brief summary of the leading principles of professional ethics. Just to quote three paragraphs:

"When a senior nurse is being addressed, politeness should prompt the junior to withdraw."

"The senior nurse shall have the junior nurse accompany her when making rounds with doctors whenever possible."

"It is unethical to accept money from patients. A servant or a waitress may do so, but not a nurse. Should you do so you will be expected to be partial to your patients and partiality must never exist."

The rules and regulations proper are limited to three brief pages and are classified under the heading of rules concerning the uniform, rules when on duty, rules concerning the dining room, night nurses, day nurses, residence, and the classroom.

Two final sections are devoted to simple don'ts and correct English. The whole booklet is so refreshing in style and content that we wish it might be imitated by other hospitals and so replace the long, stilted, wearisome rules that are so commonly used.

Question Box

Trouble with Glucose and Soda Hypodermoclysis.

164. Q. We have had several cases of necrosis, or a kind of gangrene of the tissues after hypodermoclysis of five per cent glucose and soda had been administered to patients after surgical operations or others in a critical condition. Doctors generally prescribe one thousand c.c., to be given in the breast or thigh, as it can be better taken up. This solution is prepared fresh by our resident pathologist under the best conditions, of course, and is administered by well trained graduate nurses, who know and understand the technique of hypodermoclysis in general. This necrosis has occurred in the breast as well as in the thigh, and after administration of 250 c.c. as well as 500 c.c. It is given slowly, with low pressure, and the graduated container is only raised high enough to allow the solution to enter. The skin changes to a reddish or purplish hue a short time after the administration. The skin sometimes peels off (we have had two or three cases of sloughing tissue) or, when this does not happen, lumps remain in the breast for months after the patient returns home, in many cases.

Can you help us solve this problem? Should we continue to obey the doctors' orders in the case, in view of the hospital liability question involved? Any answer or help will be greatly appreciated by, A Sisters' Hospital.

A. Will the readers of this question, please, answer. Address: HOSPITAL PROGRESS, 1212 Majestic Building, Milwaukee, Wisconsin.

Laboratory Work and Hospital Rating.

165. Q. Can a hospital be approved that does routine laboratory work in the hospital; Wassermanns and tissue examination being done outside the hospital? The amount of laboratory work does not seem to be sufficient to warrant the employment of a resident technician.

A. According to our information, it can be approved, assuming that the laboratory work is done satisfactorily and that in all other respects the hospital meets requirements.

Temperature Chart.

166. Q. Should a temperature chart be kept for patients remaining 12, 48 hours in the hospital?

A. Generally speaking, yes.

Doctor's Staff.

167. Q. How many doctors comprise a staff?

A. Each department should be represented.

Follow-up Records.

168. Q. Would it not be sufficient perhaps to follow up all surgical and cancer cases?

A. Follow up every patient with regard to whose progress information might be important to both him and the hospital.

Recording a Death.

169. Q. Is death occurring in the moribund patient within 24 hours after admission to be counted as hospital death?

A. Yes. However, a special classification for such deaths might be made in the report.

BOOKS RECEIVED.

1. **Florence Nightingale.** A Drama. By Edith Gittings Reid. The Macmillan Co., New York, 1922.

2. **Obstetrics for Nurses.** By Everett Dudley Plass, M. D. D. Appleton and Co., New York, 1922.

Diseases of the Thyroid Gland.

By Arthur E. Hertzler, M. D., F. A. C. S. (C. V. Mosby Co., St. Louis, 1922). Book of 245 pages, with 10 chapters and 106 illustrations.

The subject is treated under the following headings: Etiology and pathogenesis of goiter; normal and pathologic anatomy of the thyroid gland; symptomatology of diseases of the thyroid gland; diagnosis of thyroid disease; prognosis in disease of the thyroid; goiters in unusual places; hospital management of goiter patients; treatment of diseases of the thyroid gland; topographic anatomy of the thyroid gland; technic of operations on the thyroid gland. A feature of this book is the illustrations, which, for the most part, are excellent. Also to be noted is the fact that the author seems to have aimed mainly at bringing out the more important points of the subject.

The Place of Version in Obstetrics.

By Irving W. Potter, M. D., F. A. C. S. (C. V. Mosby Co., St. Louis, 1922.) Book of 138 pages, with 7 chapters, and 42 illustrations.

The subject is treated under the following heading: Early history of version; version in the nineteenth century; present day employment of version; author's technic of version; criticisms and answers; indications and advantages of version; conclusion. The illustrations clearly show all the steps in the author's technique. It will be interesting to note the future history of this method.

Flashes of Fun

TROUBLES OF A TRAINING SCHOOL.

I'm so perplexed, and sorely vexed,
There's good reason, you'll agree;
We must use the metric system,
Says the latest U. S. P.

The unit, well, it's fifteen grains,
They call it just one gramme,
And tell us multiply by four,
Which gives you then one drachm.

In one full ounce there's thirty,
And one thousand in a quart;
Five hundred mils is called a pint,
In measures that are bought.

Now a deci-gramme is one-tenth a gramme,
I wonder if that's right!
It gives us grain one and a half,
Why I'm really getting bright.

Then a centigram, one hundredth
Of the fifteen grains, I see;
Somehow I think I'll like it
When proficient I shall be.

They tried to tell us one C.C.
Should now be called a mil.
But just to save confusion
We're to call it c.c. still.

A milligram is a thousandth
Of the unit, our first gramme;
I think I'd get a hundred
If we should have exams.

If I'm to change my grains to drachms
I just divide by four,
To ounces—I use thirty,
Why each day I'm learning more.

Somehow I think that metric
Is as easy as can be.
I'm glad they have adopted it,
In our famous U. S. P.

—S. M. E., St. Francis Hospital School for Nurses, Hartford, Conn.

Nurses' Retreat. The first annual retreat for the nurses of St. Joseph Hospital, Bloomington, Illinois, was held Dec. 10-14, and was conducted by Rev. Symphorian Weiner, O. F. M. Cincinnati, Ohio. The nurses were very much interested, as it portrayed the actual life of a nurse thruout. The nurses consecrated themselves to the Blessed Virgin on the last evening which was followed by a sermon, Benediction and Papal Benediction. The following morning High Mass and Benediction, marked the close of the retreat. Singing was rendered by the nurses.